NATUR CYMRU
Nature of Wales

Number/Rhif 49 • Winter/Gaeaf 2013-14

- *Swifts*
- *Cuckoos*
- *Golden Plover*
- *Greenland White-fronts*
- *Y Styrsiwn*
- *Orchards*
- *People and nature*
- Books, news, comment

NATUR CYMRU TANYSGRIFIADAU • SUBSCRIPTIONS

Cyhoeddir Natur Cymru bedair gwaith y flwyddyn, mis Mawrth, mis Mehefin, mis Medi a mis Rhagfyr. Cyhoeddir erthyglau yn yr iaith wreiddiol. Costau yn cynnwys tâl post o fewn y DU.

• Unigolion £16.00 • Debyd Uniongyrchol £15.00 – holwch • Corfforaethol £30.00 • Ôl-rifynnau £3.00
Cynnig arbennig i danysgrifwyr yn unig – 5 neu fwy o ôl-rifynnau am £1.00 yr un

Mae'r ***rhwymwyr*** yn dal 10 rhifyn, a cheir mynegai. 1 – £8.95 • 2 – £16.95 • 3 – £24.95 • 4 – £31.95
Sieciau'n daladwy i Natur Cymru Cyf. I dalu gyda cherdyn ffoniwch 01248 387373 neu ewch i www.naturcymru.org.uk

Natur Cymru is published four times per year, in March, June, September and December. Articles are published in the language in which they are submitted. All prices include UK P&P.

• Individual £16.00 • Direct Debit £15.00 – please enquire • Corporate £30.00 • Back issues £3.00
Special offer to subscribers only – 5 or more back issues for only £1.00 each

Binders hold 10 issues, complete with index: 1 – £8.95 • 2 – £16.95 • 3 – £24.95 • 4 – £31.95
Cheques payable to Natur Cymru Ltd. Card payments 01248 387373 or www.naturcymru.org.uk

Argraffwyd yn y DU gan Cambrian Printers Ltd. Achrediad ISO-14001 a Systemau Rheoli Amgylcheddol blaenllaw. Argraffwyd ar bapur ffynonellau cymysg yr FSC Mwydion o goedwig a ardystir gan yr FSC. Ffynonellau a reolir, heb gynnwys coedwigoedd annerbyniol. Rhif cadwyn gwarchodaeth TT-COC-2200. www.fsc-uk.org

Printed in the UK by Cambrian Printers Ltd. ISO-14001 accredited with award winning Environmental Management Systems. Printed on FSC mixed sources paper. Pulp from an FSC-certified forest. Controlled sources, which exclude unacceptable forestry. Chain of custody number TT-COC-2200. www.fsc-uk.org

Llun y clawr/Front cover:
'Siskin' by Chris Wallbank
christopherwallbank@yahoo.co.uk
www.chriswallbank.com
Chris's work is being exhibited at RSPB Ynys Hir in Spring 2014.

Lluniau eraill/Other illustrations:
Mandy Marsh, Alastair Robertson

Natur Cymru Ltd.
Maes y Ffynnon,
Penrhosgarnedd, Bangor,
Gwynedd LL57 2DW, UK.

01248 387373
info@naturcymru.org.uk

Rheolwr Cynhyrchu / Production Manager:
Mandy Marsh

Golygydd / Editor:
James Robertson
naturcymru@gmail.com
01248 422223

Rheolwr Marchnata / Marketing Manager:
Huw Jenkins
07943 576275
huw.naturcymru@btinternet.com

Mike Langman RSPBimages.com

Cwmni Cyfyngedig trwy Warant yw Natur Cymru Cyfyngedig, ac nid yw'n gwmni sy'n gwneud elw. Mae wedi ei gofrestru yng Nghymru a Lloegr, rhif 5636217. Nid barn Natur Cymru Cyfyngedig neu'r Golygyddion a leisir yn y cylchgrawn hwn o angenrheidrwydd.

Natur Cymru Limited is a non-profit making Company Limited by Guarantee, registered in England and Wales, no. 5636217. The views expressed in this magazine are not necessarily those of Natur Cymru Limited or of the Editors.

ISSN 1742-3740

Dylunio gan/Design by: Mel Parry Design, melparry1@tiscali.co.uk

NATUR CYMRU CYNNWYS • CONTENTS

Golygyddol / Editorial 2-3
James Robertson

David, the most famous Welsh cuckoo • Graham Appleton ..... 4 - 7
Tracking cuckoos by satellite

Swifts – life on the wing • Stephen Bladwell ..... 8 - 11
Fascinating details from the Swift Inventory

In defence of wild land – the John Muir Trust in Wales • Stuart Brooks ..... 12 - 16
Safeguarding the future of Carreg y Saeth

Greenland white-fronted geese – parents par excellence • Stephen Bladwell ..... 17 - 19
Is good parenting enough to save these birds in Wales?

Thinking and talking in the trees – the Llais y Goedwig gathering 2013 • David Williams ..... 20 - 23
Making decisions in Community Woodlands

Traditional orchards – a new habitat map for Wales • Steve Oram ..... 24 - 29
Fruity havens for wildlife

Golden plover – harnessing modern technology • Mick Green, Heather Crump, Tony Cross and Paul Leafe . 30 - 33
News from an important ringing project

Y Styrsiwn yng Nghymru • Duncan Brown ..... 34 - 38
Cofnodau o 'ffosil byw'

In my backyard • Rob Collister ..... 39 - 40
Writing competition runner-up 2012

NODWEDDION ARFEROL / REGULAR FEATURES

Field Notes • Martin Bailey 41
The red squirrel bouncing back

Birds at large • Sian Whitehead 42
Welsh avifauna

Marine matters • Ivor Rees 43
Can ecosystems be rebalanced while fish go with chips?

Green bookshelf • Mark Cocker, Geoff Gibbs, David Saunders, James Robertson ..... 44 - 45

Discoveries in science • Kate Mortimer 46
Shovelhead worms of Wales

Mammals round-up • Frances Cattanach ..... 48 - 49
Reports of otters and deer: getting involved with MaMoNet

Plants at large • Bruce Langridge 50
Fairy fun time in the National Botanic Garden Wales

Woods and forests • Rory Francis 52
Ancient trees: help on the way?

Liz Fleming-Williams

GOLYGYDDOL EDITORIAL

Gan wrando ar glegar swnllyd gwyddau gwyndorch y diwrnod o'r blaen, atgoffwyd fi pa mor rymus y gall galwadau adar ddwyn y byd naturiol i'r cof. Eto, rydym yn colli rhai o seiniau pwysicaf byd natur: y gog yn cyhoeddi'r gwanwyn, gwich cyffro'r wennol yn yr haf, a'r bryniau'n atseinio galwad y cwtiad aur a'r ŵydd dalcenwyn wrth iddynt ddychwelyd i aber Dyfi am y gaeaf. Mae'r rhain oll yn rhywogaethau mewn trafferth. Mae erthyglau yn y rhifyn hwn yn edrych ar ymdrechion i ddeall achosion y dirywiad, fel y gellir mynd ati i adfer poblogaethau i'w priod gyflwr.

Mae cofnodion hanesyddol, y gellir eu canfod mewn

Cornicyllod Aur, Pumlumon
Golden Plovers, Plynlimon

dyddiaduron a hen bapurau newydd, yn dwyn yn ôl i fywyd y gorffennol dynol a naturiol. Mae un dyddiadurwr o'r bedwaredd ganrif ar bymtheg yr wy'n ei ddarllen yn dal cyffro'r ennyd yn ei gofnodion, sydd cyn amled yn 'clywais regen yr ŷd' â'r 'clywais y gog' mwy disgwyliadwy. Mae papurau newydd yn dal i gynnwys straeon pan ddigwydd yr anghyffredin, fel pan ddelir styrsiwn yn nyfroedd Cymru, o bryd i'w gilydd. Mae erthygl yn datgelu rhai cofnodion hanesyddol cyfareddol o'r pysgodyn hynod werthfawr hwn, sy'n cynhyrchu cafiâr.

Ffasiynol, y dyddiau hyn, yw pennu gwerth natur yn nhermau'r hyn y gall ei wneud ar gyfer yr economi. Ar ôl y fath gynhaeaf afalau toreithiog, mae gwerth perllannau yn nhermau'r cnwd afalau'n amlwg. Mae budd perllannau i bobl yn ehangach o lawer na hynny, ac nid eu rhinwedd lleiaf yw eu bod yn lleoedd dymunol, llawn bywyd gwyllt. Cyhoeddir hanes gwaith rhagorol mapio tegeirianau yma. Mae'n arbennig o dda gennyf groesawu erthygl gan Ymddiriedolaeth John Muir ynglŷn â chynlluniau ar gyfer ei phryniant tir cyntaf yng Nghymru. Mynegir yn berffaith yma rhai o'r rhesymau anariannol dros mawrbrisio natur.

Mae nifer tanysgrifwyr y cylchgrawn hwn wedi cynyddu yn ystod y mis neu ddau ddiwethaf, ac os ydych chi'n un ohonynt, croeso i chi. Ni olyga hynny fod ein dyfodol ni'n ddiogel, serch hynny. Yn y gorffennol, cawsom gefnogaeth ardderchog sawl Corff Anllywodraethol a sector cyhoeddus, megis Comisiwn Coedwigaeth Cymru, Asiantaeth yr Amgylchedd ac, yn enwedig, Cyngor Cefn Gwlad Cymru. Cydnabu'r cyrff cyhoeddus hyn werth llais annibynnol dros natur a rhaglen amgylcheddol gyfoes Cymru. Gobeithiwn y bydd yr uwch-asiantaeth newydd, Cyfoeth Naturiol Cymru, o'r un farn.

Listening to the noisy jabber of Brent Geese the other day, I was reminded how powerful an evocation of the natural world bird calls can be. Yet we are losing some important notes in the soundscape provided by nature: the Cuckoo heralding Spring, the Swift screaming its summer joy, the uplands echoing to the call of Golden Plover, and Greenland White-fronted Geese returning to winter in the Dyfi estuary. These are all species in trouble. Articles in this edition look at efforts to understand the causes of decline, so that action can be taken to restore populations to health.

Historic records, which can be found in diaries and old newspapers, bring past human and natural history to life. One 19th century diarist I am reading captures the excitement of the moment in entries, which are as often 'heard the corncrake' as the more predictable 'heard the cuckoo'. Newspapers are still running stories when rare events happen, such as the occasional Sturgeon being landed in Welsh waters. An article uncovers some fascinating historic records of this highly prized, caviar-providing fish.

It is fashionable these days to value nature in terms of what it can do for the economy. After such a bumper apple harvest, the value of orchards in terms of the apple crop is evident. Orchards have many other values to people, not least as wildlife-rich places to enjoy. An account of a splendid piece of work mapping orchids is published here. I am particularly pleased to welcome an article from the John Muir Trust on plans for its first land acquisition in Wales. Some of the non-monetary reasons for valuing nature are perfectly expressed here.

This magazine has enjoyed an increase in subscriber numbers in the last month or two, and if you are one of those, a warm welcome to you. This does not mean that the future for us is secure, though. In the past we have had wonderful support from a number of NGOs and public sector bodies, such as Forestry Commission Wales, Environment Agency Wales, and especially from the Countryside Council for Wales. These public sector bodies recognised the value of an independent voice for nature and the contemporary Welsh environmental agenda. We hope that the new super-agency Natural Resources Wales will take a similar view.

James Robertson

John Bridges RSPBimages.com

David, the most famous Welsh Cuckoo

Cuckoo *Cuculus canorus* Cog

The pioneering Welsh cuckoos of 2012 faced a tough autumn after an appalling summer. Eighteen months on, David, tagged at Tregaron in Ceredigion, is the lone representative of the Principality. He's spending the winter in a forest in the Democratic Republic of Congo and sending information to the BTO's cuckoo team every couple of days. ***GRAHAM APPLETON*** *explains how David is going to help us to conserve this fast-disappearing and iconic species.*

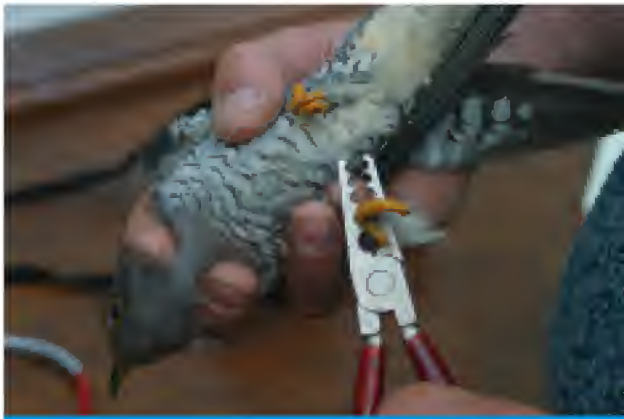
People – and not just birdwatchers – notice cuckoos. Their absence from much of England, where declines have been measured at 65% since 1995 (compared to 34% in Wales and only 5% in Scotland, according to the BTO/JNCC/RSPB Breeding Bird Survey) is causing concern. What's the problem? Could there be a different set of pressures on the species in different parts of the UK? Or perhaps their migration routes take them to different places, with life being tougher for English and Welsh birds and easier for Scottish ones? By using satellite tags we are starting to learn more.

In 2011 we only had one cuckoo dot south of the Sahara on the map of Africa, provided by a ringed bird that was killed and reported in Cameroon in 1930. Thanks to the British Trust for Ornithology's Cuckoo Tracking Project, in less than three years we have learned a huge amount about the species' migratory journeys. With the 30 named cuckoos we have experienced summer deluges, Spanish drought and the hunt to keep up with seasonal flushes of insects in Africa. Having

tagged a third group of cuckoos in 2013, we are starting to understand just how big a game of snakes-and-ladders individuals are playing, as they fly south and north each year, and how variable things can be between years. Sadly the conditions that faced the Welsh birds in 2012 turn out to have been particularly unkind, which probably explains why only one of this handful of tagged birds is still contributing data.

It turns out that 2011, the first year of the project, was a good year for cuckoo migration and all five birds ringed that year were still providing data in December. In 2012 the same could only be said of five of the fourteen males that left their breeding sites, one being Chris, now providing a third year's worth of data. Two of the losses last year are, we think, associated with tag failure, but that still means a 50% loss on autumn migration. Given that cuckoo numbers in the UK are declining, one of the key aims of the project is to try to understand the circumstances that may be contributing to increased mortality. Knowing how and when we lose marked cuckoos is as important as understanding their migratory journeys. Pleasingly, 2013 is looking a lot better, with 14 out of 18 birds successfully completing the trans-Saharan crossing.

Kelvin Jones BTO



Fitting one of the cuckoos with a BTO ring

In the first year of the project we hoped that (in line with estimates of survival from ringing) two or three of the five cuckoos would complete the round trip to their mystery wintering locations in Africa. We were surprised and delighted when they all made it as far as Africa and astounded that they revealed new information about early departure dates and a migration route through Spain and western Africa. The return journey was trickier, with Clement being lost soon after heading westwards from the Congo forests, and Martin succumbing in Spain. Particularly poor weather may well have been to blame here; we know that there were unseasonal hail storms in the exact spot where we lost Martin. Kasper's tag is thought possibly to have failed soon after he completed his northward desert crossing but Chris and Lyster's tags were still working when they returned to Norfolk – which was exciting news for everyone involved.

Year	Male cuckoos tagged	Location
2011	Chris, Clement, Kasper, Lyster, Martin. Chris is collecting a third set of data	East Anglia
2012	David, Indy, Iolo and Lloyd. David is still alive	Wales
2012	Reacher and John were new birds. Lyster and these two died on the way south.	East Anglia
2012	BB, Chance, Mungo, Roy and Wallace. BB and Chance are on their second tracking mission	Scotland
2013	A total of 17 birds head south and 14 make it across the Sahara: 5 out of 5 birds from Scotland, 1/1 Wales, 5/6 East Anglia, 1/1 Sussex and 2/4 Southwest England	UK

Kelvin Jones BTO

When the cuckoo preens, the tracking device will settle into the feathers

Welsh cuckoos join in

We expanded the project in the summer of 2012 to include males from Wales and Scotland. We were keen to discover if Scottish birds, whose numbers do not seem to be declining, might have different migratory strategies, and to look for east-west differences between Norfolk and Wales. Hopefully, as we compare data for these different groups, and start to add in data from future years, we shall better understand the perils that cuckoos face each autumn, winter and spring on their 10,000 mile round trips.

Five male cuckoos were tagged in Ceredigion in 2012, as well as the ill-fated female cuckoo, Idemeli, downed by bad weather, attacked, rescued, tended in a wildlife sanctuary and then flown to Italy. One of the five males stopped transmitting before the end of the wet summer, but four set off for Africa. In 2011 migration had been relatively straightforward but in 2012 there were a number of cases where we saw birds roam southern Europe, presumably because they could not find food. One of these wanderers was Lloyd, named after the BTO's Honorary Wales Officer, John Lloyd. He ranged widely, sampling sites in north-west and north-east Italy, as well as in south and south-west France, before making it across the Mediterranean. He travelled a lot further east than any of the birds that have been tagged in England, flying over Egypt and Sudan en route to the Congo forests. David was another eastern bird but he comes into the story later on.

Iolo flew almost straight south from northern Italy but failed to cross the desert, with the last transmissions from the middle of Libya – perhaps the resources he was able to take on board were insufficient to get him across the Mediterranean and the Sahara? The other Welsh cuckoo, Indy, took the same sort of route but really surprised us by making a u-turn in the middle of the Mediterranean. Having flown the length of Italy and two-thirds of the way across the sea, he returned to northern Italy: surely this must have been associated with running out of resources and going back to his last known feeding ground to refuel? He was able to fatten up again and to cross the Mediterranean over Corsica and Tunisia. Having completed the Sahara crossing he succumbed in Chad. So, only two of the Welsh cuckoos reached their final destinations, along with two out of five Scottish cuckoos and one out of four from East Anglia. Having shared the trials and tribulations of the birds of 2012, we were exhausted!

In 2011, we had been surprised when two of the five birds tagged in East Anglia successfully used a previously unknown westerly migration route via Spain. In 2012, no East Anglian bird that took this option completed the journey. John died in France, Reacher died in the droughts of Granada (Spain) and Lyster failed to complete his journey across the Sahara. Chris, the only English cuckoo to take the Italian route, made it to his wintering area in Congo. Perhaps the westerly route is good in some years and not in others, and isn't it interesting that no Welsh or Scottish cuckoo has so far gone this way?

David, the last survivor

It is really unfortunate that the only year in which we

Kelvin Jones BTO

Chris and Phil attach the transmitter

David's varied routes to and from Africa

have had funds to work on Welsh Cuckoos was 2012, when the weather was awful in the summer and droughts caused problems on the way south for two birds. Lloyd made it to the Congo forests but perished in Morocco, on the way north. As the lone Welsh representative, David is still providing some fascinating stories. In spring 2013 he arrived in Sherborne on 26 April but, having sampled the cold weather, he flew back across the channel two hours later, spending at least a week in central France before reaching his tagging site in Tregaron on 9 May. Interestingly, when he headed to Montenegro in July, he took a completely different route to last year, retracing his steps to France and cutting across Italy. We expect birds to use the same travel-plan in each season and this variation showed that David 'knows' where Montenegro is and can get there via a completely different route.

At the large scale, we are starting to appreciate the breadth of strategies that are used by different birds, and there is a hint that birds from different parts of the UK might use different routes. However, some of the most interesting conservation insights come from the detailed information on daily movements. A lot of birds are using patches of remnant forest and scrubby woodland whilst on their travels, land that has been set aside for the conservation of other species. This emphasises the conservation imperative of providing a network of protected areas for migrant birds within Europe. Further south, African stop-over areas are also very important, as birds track the rains across the continent and the flush of insects that comes with them. With increasing pressures on land, as African countries seek to feed growing populations, we will need to look for conservation solutions for European migrants that can work for people as well as birds. Meanwhile, we can play our part in the UK by providing conditions in which cuckoos can flourish, so that as many young birds as possible fly south each autumn.

Over the next year BTO staff will be analysing the data collected by David and the other cuckoos. This is expensive science, costing over £6,000 per bird on average, but it is providing insights that we could only have dreamed of four years ago. We are grateful for financial support from individual cuckoo sponsors, the BBC Wildlife Fund, Essex & Suffolk Water and The Sound Approach. The research is led by Chris Hewson, with help from BTO colleagues and volunteer ringers.

***Graham Appleton** is Director of Communications for the British Trust for Ornithology. For more information visit www.bto.org/cuckoos; BTO, Thetford, Norfolk, IP24 2PU.*

Dafydd, y goroeswr olaf

Ers 1995, mae niferoedd cogau Cymru wedi gostwng gan 34%. Mewn ymdrech i ddeall pam, bu Prosiect Olrhain Taith Cogau'r British Trust for Ornithology yn tagio adar y DU ac yn dilyn eu symudiadau trwy gyfrwng lloeren. Mewn cwta tair blynedd, maent wedi dysgu llawer iawn am deithiau ymfudol y rhywogaeth, a pha mor gyfnewidiol y gall pethau fod o flwyddyn i flwyddyn. Byddem yn disgwyl i adar ddilyn yr un llwybr bob blwyddyn, ond mae Dafydd, y goroeswr olaf o Gymru, wedi synnu pawb trwy ddilyn dau lwybr ymfudo gwahanol i gyrraedd Montenegro, gan ddangos ei fod yn 'gwybod' lle mae Montenegro ac yn gallu newid ei daith o ganlyniad.

Ron Evans

Swifts - life on the wing

Common swift *Apus apus* Gwennol Ddu

Swifts exert a unique fascination over people, and yet their extraordinary lifestyle makes them exceptionally hard to study. The importance of doing so, and of establishing a swift 'inventory' is underlined by disturbing evidence of recent population declines, as ***STEPHEN BLADWELL*** *explains.*

They're some of the last spring migrants to arrive in Britain but also some of the first to leave. When they do arrive, taking possession of their nest site and repairing their nest, it might be the first time they've touched the ground for many months.

Swifts (Gwennol Ddu) spend their lives almost entirely on the wing – feeding, preening, mating (the only group of birds who do so) and even sleeping in flight. They feed exclusively on insects, in flight or drifting in the upper atmosphere, and only come down to land when nesting. Breeding adults return to the same nest site each spring; in Wales this is generally May. In July they are off again, joined by their young on an epic migration which sees them cover distances of around 6,000 miles. Some of this year's cohort of fledglings will stay predominantly airborne until the summer of 2016 when they return from southern Africa[1] as adults themselves to breed.

In just a few decades the number of swifts gracing our skies and

Giuseppe Cristiano

Young swift

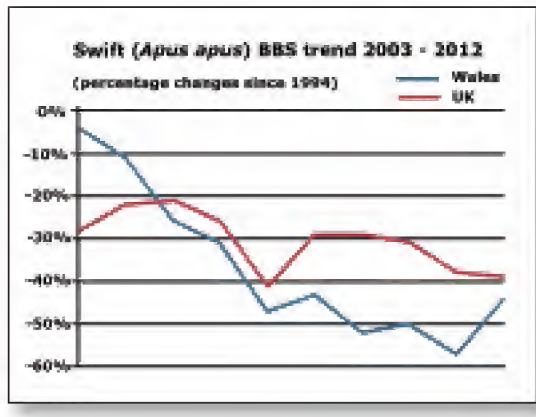
celebrating a Welsh summer has almost halved. This picture is similarly bleak across Britain, with declines becoming worse the further north they go[2].

Swifts and their relatives form a group called the *Apodidae*, an ancient group that is thought to have separated from all other birds in the Tertiary (65 million years ago) or Cretaceous period (70 million years ago), about the time *Tyrannosaurus* died out. Swift species vary geographically, tending to be paler in drier areas and darker in wetter areas, as well as smaller in hotter and larger in colder regions. The further north a swift species lives, the darker it will be: our swifts (Common swift *Apus apus*) are the darkest of the lot. Their closest living relatives are swiftlets, tree swifts (which can perch) and the hummingbirds.

Embedded in folklore, swifts have evolved as some of our closest neighbours. In Wales, as in the rest of Britain (and Europe), swifts traditionally nest in colonies and are almost invariably found in buildings – in gaps under tiles or beneath windows, in the eaves or within gables. It's not surprising that these nest sites are being lost when buildings are renovated or demolished.

Data collected as part of the 'Swift Inventory' shows that two thirds of swifts in Wales nest in buildings that are now more than a century old, mainly houses but also churches, schools and public buildings. Swifts are near perfect neighbours; absent for 40 weeks of the year, quiet and unobtrusive when they are at the nest but boisterous and fun on the odd summer evening. Their nests are economical, constructed of whatever they gather on the wing, bonded with saliva, tucked into available spaces and leaving very little debris at the end of the season. It is easy for their nest sites to vanish without anyone realising they were ever occupied.

This urbanisation has been a necessary adaptation as swifts would originally have nested in tree hollows and woodpecker burrows in ancient forests, along with cliffs and crags. Some still do, such as the small colony found in a combination of woodpecker holes and tree nestboxes in the Caledonian Forest at Abernethy in northern Scotland or the colonies in the Bialowieska Forest in north-eastern Poland.



Swifts can be very inconspicuous at the nest, but screaming at roof level usually means they are nesting somewhere close by. Swifts range over huge areas and birds screaming up high, or feeding over water, woodland, meadow or the skies above towns and cities could have come from many miles away, chasing their insect prey.

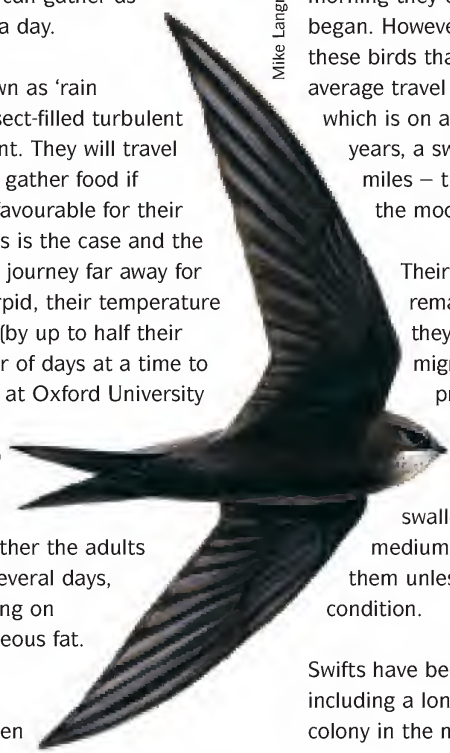
Selective feeders

Swifts hunt for insects over a wide area and range of habitats but are very selective in their prey choices, preferring insects 2-10mm long – aphids, hoverflies, leafhoppers, and spiders drifting in summer thermals. An abundant supply of insects is critical for their survival, which is why their stay in Britain is relatively short and linked to the late spring-summer period when insects are more numerous and weather generally more suitable for insect flight. Parent swifts collect up to 1,000 insects at one time (studies have shown this to consist of up to 320 species) to take back to their chicks which they deliver in a lump, known as a 'bolus'. When they have chicks to feed, swifts can gather as many as 100,000 insects a day.

Swifts are sometimes known as 'rain swallows', following the insect-filled turbulent air ahead of a weather front. They will travel extraordinary distances to gather food if conditions locally are not favourable for their high energy demand. If this is the case and the parent swifts are forced to journey far away for food, the young can go torpid, their temperature and metabolic rate falling (by up to half their normal level), for a number of days at a time to save energy. Observations at Oxford University have shown swift chicks can go without food for up to 10 days with a weight loss of 50%. In the event of seriously inclement weather the adults can roost at the nest for several days, also in a torpid state, relying on energy stored as subcutaneous fat.

Though there are many contenders, swifts have been shown to be the fastest of all birds in level flight (the peregrine is the fastest of all birds, but only in a steep dive called a stoop). The swifts you see here in summer, often referred to as common swifts[3], are capable of travelling as fast as you should be on a motorway (69.3mph[4]) as they form 'screaming parties' during summer evenings, when 10-20 swifts will gather in flight around their nesting area.

Larger 'screaming parties' are formed at higher altitudes especially late in the summer season when you may see non-breeding swifts spiralling up towards the stars as darkness falls, their calls fading with the daylight. Using radio-tracking data it has been confirmed that these birds fly up to around 10,000ft, ascending to sleep on the wing, while still breeding adults tend to spend the night at the nest.



Mike Langman RSPBimages.com

It's at this altitude that they shut down half their brain[5], continually correcting the wind drift so they wake up where they fall asleep, though they don't always get it right – their night vision is poor and by morning they could be 50 miles from where they began. However, this doesn't pose a problem for these birds that are constantly on the move and on average travel 500 miles a day. Over its lifetime, which is on average 5.5 years but can be up to 21 years, a swift could travel as many as two million miles – the equivalent of four round trips to the moon.

Their almost perpetual motion, the ability to remain alert when resting, and the speeds they travel when gathering food and on migration (on average 25mph) mean that predators find them hard to catch. Small falcons and hawks, which generally prey on other birds within the swift's size and weight range (such as swallows and martins, about the size of a medium hens egg, 40grams), rarely catch them unless they are injured or in poor condition.

Swifts have been the subject of a number of studies, including a long-term research programme on the colony in the museum tower at Oxford University[6]. These studies have given us invaluable information

on their physiology and behaviour but we are yet to understand fully the reasons for their rapid decline in recent years. However, there are a number of organisations and institutions undertaking research to determine the causes, as well as developing practical responses to the issues that can be addressed here.

The 'Swift Inventory' is a collaboration of some of these groups, a database of nest sites as well as records of individual swifts and 'screaming parties', bringing together records from all over the UK. The inventory relies on people interested and motivated to observe and record the swifts in their local patch and input these records to an online system. Combined with other data held on the National Biodiversity Network and in our four Local Record Centres, we are beginning to get a clear picture of where swifts are currently nesting in Wales, providing important information to guide local decision-making. Use of such information by local planning authorities should help maintain existing nest sites. Provision of new opportunities for young adult pairs to establish nests is also crucial to their conservation and can literally be 'built' into development proposals in suitable areas.

For more information on the 'Swift inventory' go to - www.rspb.org.uk/helpswifts
Find contact details for your Local Records Centre here http://www.lrcwales.org.uk
Please submit your sightings to either one of the above to ensure your records make a difference to the conservation of this unique species.

***Stephen Bladwell** is Biodiversity Manager for RSPB Cymru.*

References

1. Swifts migrate to equatorial and sub-equatorial/southern Africa via a number of routes. Swifts from Britain generally winter in Zaire, Tanzania or Zimbabwe. Studies in Sweden have shown swifts breeding there winter in the Congo region.
2. Risely, K. *et al.* 2013. The Breeding Bird Survey 2012. BTO Research Report 645. British Trust for Ornithology, Thetford. This latest Breeding Bird Survey (BBS) shows swifts have declined across the UK by -39%: in Wales by -44%; -39% in England and rising to a -57% decline in Scotland.
3. The needle-tailed swift of Africa and Asia has been reported to reach 170 kph, 105mph, but this is not proven.
4. Henningsson *et al.* 2010. How swift are swifts? Journal of Avian Biology. 2010 41: 94-98.
6. www.oum.ox.ac.uk/swifts

Mark Thomas RSPBimages.com

Gwenoliaid Duon – byw yn yr awyr

Mae gwenoliaid duon yn byw bron yn gyfan gwbl yn yr awyr, ac yn cysgu yno, hyd yn oed, gan esgyn i 10,000 troedfedd, diffodd hanner eu hymennydd, a chywiro'u safle'n barhaus ar y gwynt. Glaniant ar gyfer nythu'n unig. Mae gwenoliaid duon sy'n rhieni'n casglu cymaint â 100,000 o bryfed y diwrnod i fwydo'u cywion, ac yn teithio pellteroedd i chwilio am fwyd. Â cywion i gyflwr cysglyd, a gallant fyw hyd at 10 diwrnod heb fwyd, yn aros i'r oedolion ddychwelyd. Trist dweud, mae eu niferoedd wedi haneru yng Nghymru. Daw'r 'Rhestr Gwenoliaid Duon' â chofnodion y DU ynghyd, gan ddarparu gwybodaeth bwysig i lywio penderfyniadau lleol ynghylch cynnal safleoedd nythu sy'n bodoli eisoes.
www.rspb.org.uk/helpswifts

Dave Newbould

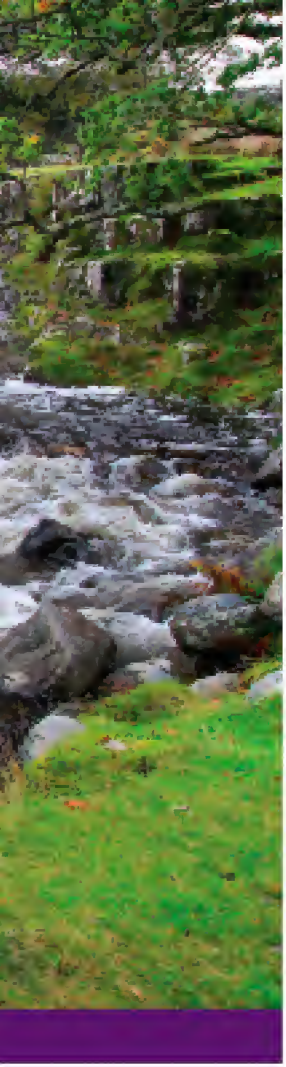
In defence of wild land - *The John Muir Trust in Wales*

Cwm Bychan

The John Muir Trust is making its first land purchase in Wales. STUART BROOKS, its Chief Executive, explains its plans and why Carreg y Saeth Isaf is now his favourite wild place in Wales.

"The rocks now assumed a wild and threatening aspect as we emerged into an open track and entered upon the domain of Dolwreiddiog – a little beyond which commences perhaps the wildest scenery in North Wales." These words were written back in 1838, but while most of the Welsh landscape has since changed beyond all recognition, this description of the area around Cym Bychan and Carreg y Saeth by George John Bennett in the *Pedestrian's Guide Through North Wales* could have been written today.

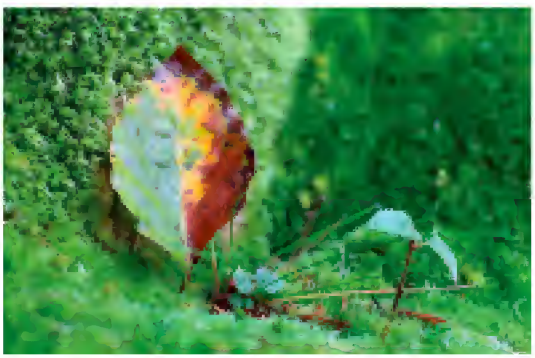
I first visited this area at the invite of the current owner who was keen to sell this piece of wild Wales to the John Muir Trust, which was founded 30 years ago to protect the last areas of wild land in the UK. Thankfully, even after centuries of industrial development we still have magnificent mountains, beautiful coasts, mysterious forests and empty peatlands where large-scale development has not yet scarred the landscape and where people can still feel a part of nature.



The Trust has strong expertise in managing landscapes valued for their ecology and scenic beauty. In Scotland, we own and care for almost 25,000 hectares of wild land including Ben Nevis, and parts of Skye and Knoydart. We also work in partnership with land-owning community bodies across a further 90,000 hectares. Although the Trust has its roots planted deeply in Scotland, we've always had a UK outlook: of our 10,000 members nearly half live in England and Wales. For more than ten years, we have worked with hundreds of partners in Wales to involve 30,000 people in the John Muir Award, through activities such as tree planting, managing woodlands, clearing invasive species, creating wildlife habitats, building footpaths and sowing wild flowers.

Being in the landscape

On the day I arrived in this part of the Rhinogydd, the landscape glowed in vivid technicolour under a glorious blue sky and blazing sunshine. Along the twisting narrow road up the Artro valley from the village of Llanbedr, I followed a meandering river flowing through thickening oak



Dave Newbould

Dave Newbould

woodland dripping with mosses. In the UK, almost every landscape has been altered by human activity, and this area is no exception. But here, away from the single track road, the impact of people has been more subtle. Stone walls and crouched houses lurk, silent and inconspicuous, within this landscape of heather moorland, ancient woodland, gurgling water and Cambrian rock. Off the beaten tourist track, this part of the Rhinogydd has justifiably been described as the wildest part of Wales. This is not somewhere you might find yourself in by chance; you have to want to be here.

Past the farm at Dolwreiddiog, where the owners have looked after this land for the last two generations, the craggy summit of Carreg y Saeth Isaf guards the Roman Steps, the remnants of a medieval packhorse trail which leads into the heart of the Rhinogydd mountains, while the dark, still waters of Llyn Bychan reflect, as clear as a mirror, the expansive stretch of oak and beech trees that line its banks.

As I leave the tarmac my feet are washed by a fast-flowing stream and I become part of Carreg y Saeth Isaf – the Lower Rock of the Arrow – rather than a traveller through it. Scale is an interesting consideration here. Although this shares many of the wild characteristics of some of the vast landscapes we own in Scotland, it is smaller and more intimate. Here, the relationship with place is perhaps more easily won.

Dave Newbould

Natur Cymru's very own Huw Jenkins interviewing Susan Wright about the Trust

Some visitors have their eyes and ears tuned to the sky for the peregrine, merlin and ring ouzel that inhabit this place. Others are keen to explore the woodlands or challenge themselves on the rocky crags. My own destination was a small but very distinct area of peatland sitting in a depression at the foot of Carreg y Saeth itself. This is where scale really comes into play, where your eye focuses on the minutiae; the tiny globules of sticky, sweet dew on the hairs of the carnivorous sundew, the pointed pale cluster of the delicate white-beaked sedge, and the vibrant greens and reds of the Sphagnum mosses. This little peatland, so perfectly framed, is a jewel within a crown. It is also now my favourite wild place in Wales.

A light touch

So what? If it's so good, why don't we just leave it alone? After all, this land has survived for thousands of years without the help of the John Muir Trust and, because it lies within the National Park, it is heavily designated so nobody is going to come along and destroy it. These are fair questions, which we've pondered from the outset.

The conclusion we've drawn is that we are keen to carry on the excellent work of the previous owners. That will mean a light touch approach, managing grazing pressures where necessary, but also working with natural processes, helping nature to take its course and maintaining a sensitive regime. I hope that, as a landowner in the Rhinogydd, we will have a friendly relationship with our neighbours and can have constructive discussions about the management of the wider area.

The Rhinogydd National Nature Reserve is close by, the National Trust and North Wales

David Lintern

Dave Newbould

Looking towards Carreg y Saeth Isaf

Wildlife Trust have properties nearby, and local farmers have managed the land sensitively. I hope our experience of land management elsewhere can play a positive role, but we are also keen to listen and learn from others who know this land intimately. We have our own wild land management philosophy, but we are not here to impose our values on others, and we will be governed by the cultural traditions of this part of Wales.

As well as managing this area of the land to the highest ecological standards, the John Muir Trust hopes to play a greater role across Wales, working alongside environmental organisations, communities and politicians to help defend wild land when it comes under threat from inappropriate and intrusive development. Our broad mission across the nations of Scotland, Wales and England is to achieve long term protection for wild land. At the same time, we encourage people to value and engage with wild places. These objectives are not mutually exclusive; they are dependent on each other. When people become disconnected from wildness, they are less likely to stand up and be counted when these precious places come under threat.

So, becoming a landowner in Wales has added value. It gives us a stake in these conversations. What better place to illustrate what we are about than one of the wildest parts of Wales.

John Muir's legacy

The Trust takes its name and inspiration from John Muir, who is not exactly a household name in Wales. Even in Scotland, where he was born 175 years ago, he had become an almost forgotten figure until relatively recently. But in the United States, his role as the founding father of the modern environmental and conservation movement is honoured in the names of hundreds of schools, colleges, libraries, streets and parks. The 'Prophet of the Wilderness', as he has sometimes been called, combined an

Dave Newbould

The John Muir Trust has launched an appeal to raise £500,000 towards the cost of buying and managing Carreg y Saeth Isaf. You can make a donation online at **www.jmt.org/wales.asp**; by phone on **01796 470080**; by texting **MUIR13 £10** to **70070**; or by sending a cheque through the post to **John Muir Trust, Tower House, Station Road, Pitlochry PH16 5AN.**

acute sensitivity to the natural world with the adventurous spirit of a pioneering explorer. "Most people are on the world, not in it, have no sympathy or relationship to anything about them – undiffused, separate, and rigidly alone like marbles of polished stone, touching but separate," he said.

That was not always the case. The Rhinogydd itself is a land steeped in history, with early settlers, Welsh warriors who fought with kings, and, more recently, poets and artists all shaped and inspired by its rugged landscape. By purchasing Carreg y Saeth Isaf, we hope we can play a small part in encouraging people to re-establish that connection, not just with the Rhinogydd but with wild places across Wales.

***Stuart Brooks** joined the Scottish Wildlife Trust in 1995 as a field officer supporting an EU peatland conservation project. In 2009 he left the Trust as their Director of Conservation and joined the John Muir Trust as its Chief Executive. He has held various positions on conservation and land management bodies and is currently the Chairman of the IUCN United Kingdom National Committee.*

Ymddiriedolaeth John Muir yn dod i Gymru

Mae copa garw Carreg y Saeth yn rhan o'r Rhinogydd a ddisgrifiwyd yn un o rannau gwylltaf Cymru. Braidd y bu effaith pobl yma: mae hanes a diwylliant yn rhan annatod o'r dirwedd. Mae gan Ymddiriedolaeth John Muir gyfle i barhau â gwaith rhagorol y perchnogion blaenorol, a rheoli'r lle gwyllt, gwych hwn â llaw ysgafn. Mae'n apelio am arian i'w helpu i brynu'r safle.

All photos: Andy Hay RSPBimages.com

Greenland white-fronted geese

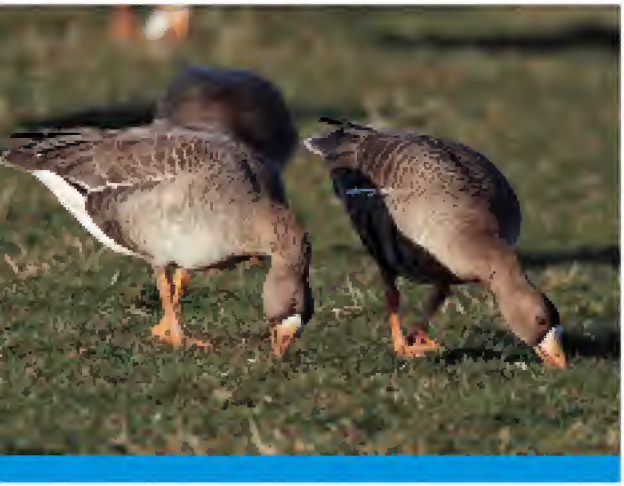
parents par excellence

At this time of year the Dyfi estuary welcomes a very special visitor – the Greenland white-fronted goose. One striking aspect of its behaviour is the length of time which parents and offspring stay together. But all is not well, as ***STEPHEN BLADWELL*** *explains: its numbers are in serious decline, and a legal ban on hunting has been missed, so any sightings in Wales of this handsome goose would be welcomed.*

Greenland white-fronted goose *Anser albifrons flavirostris* Gŵydd dalcenwyn yr Ynys Las

At first light on the Dyfi estuary, as the winter mist rises off the water, the air is filled with the familiar and intimate sound of goose talk. Amongst the thousands of other birds there'll be a flock of white-fronted geese from Greenland feeding on the intertidal saltmarsh or the quiet undisturbed grassland on the farmland around the edge.

Greenland white-fronted geese are one of two races of white-fronted geese (*Anser albifrons*) that occur in Britain during winter. The European race (*Anser albifrons albifrons*, also known as the Russian race) breeds in arctic Russia and migrates across eastern Europe to overwinter in southern England and Wales. The Greenland race (*Anser albifrons flavirostris*) breeds in the low arctic coastal fringe of western Greenland and migrates, via Iceland, to overwinter exclusively at a small number of traditional haunts in Ireland, Scotland and west Wales (as well as a small flock in northern England). They remain one of the rarest wintering goose populations in Britain, the global population having declined markedly, from 35,700 in spring 1999 to around 22,400 in spring 2012.



The Dyfi estuary on the mid Wales coast supports the most southerly regular flock of wintering Greenland white-fronted geese in the UK, and is designated as a Special Protection Area (SPA; it is also a SSSI and National Nature Reserve), with these magnificent birds as a key qualifying feature. Each year from September/October they may be found feeding on the wet grassland and salt marsh of the estuary. However, year on year the number of geese returning to Wales has been decreasing. In 2000 there were 167 geese counted but last winter only a mere 55 birds were recorded. This reflects the wider declining trend in the global population of this species.

Wintering sites are traditional, and occupancy is learned as a consequence of young birds returning with parent(s) to these locations in their first winter. This parental care and association does not end here though. Studies have shown that all goslings remain with at least one parent in their first winter: two thirds remain with parents in their second and a third stay with parents to their fifth winter. Given that their lifespan is on average not much longer (though they have been known to live for 20 years), this unusually long parental bond is one of the most interesting and possibly unique (amongst Anseriformes) behaviours of these beautiful birds.

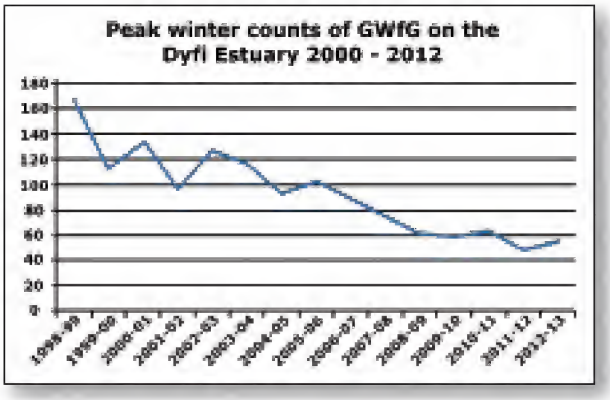
However, it is also a matter of great concern as all the evidence indicates that, once lost, sites that these family-orientated flocks use are not readily reoccupied (if at all). In Scotland, where the bulk of the UK winter population resides, considerable attention is being given by conservation organisations, including Scottish Natural Heritage, to the smallest wintering sites to prevent further extinctions and thus further contractions of range. The Dyfi is highlighted by international agreements as similarly 'at risk'. Loss of birds using this site would result in a further contraction of range, a long-term trend which concentrates the population into ever fewer sites and makes it increasingly vulnerable to external pressures and harmful events.

The importance of protecting existing wintering sites

The significance of this disconnection is evident from the small tally of 'abandoned' sites across Wales where flocks (numbering up to 500 birds at one site in the 1960s) have been lost and little hope is held that they will be reoccupied naturally. This places greater emphasis on protecting and managing those areas that our remaining flock(s) use regularly, so that the geese can be in the best possible condition for their return to their breeding grounds come mid to late April.

Around half of the global population winter in the UK (the rest spend their time in Ireland), the vast majority in Scotland. From here it is a relatively easy 1,000 or so kilometres and a 1-2 day journey to south west Iceland. Here they rest and restock their fat reserves for up to three weeks before heading off on their final few days and 1,450km journey to west Greenland, crossing the 2,700m Greenland ice cap en route, an astonishing feat for such a large bird.

Weather conditions are a key factor in the annual breeding success of these birds (as with all circumpolar species). In the Arctic there may be fewer predators and less chance of disturbance, but the window of opportunity for nesting, incubating eggs and raising a brood to flight is brief, open only for a few months. A delayed snowmelt or late spring storm can affect the birds' ability to forage and initiate nesting, significantly reducing reproductive success, which studies have shown to be chronically low in recent years even under ideal circumstances. Only a small proportion (< 5%) of the adult population breed successfully each year. As the continued existence of the global population depends



completely on the survival and breeding of these few females, any mortality, either on the breeding grounds, during migration, at staging points or on wintering sites, will inevitably have a significant impact on the population as a whole.

Greenland white-fronted geese are a globally endangered species, and in line with international agreements (principally the African Eurasian Waterbird Agreement) it is illegal to kill them throughout all of their 'range states', whether deliberately or otherwise – apart from in the UK (specifically England and Wales – they are protected in Scotland[1]). In Iceland they have been protected since 2006 whilst in Greenland they have been totally protected since March 2009.

Despite an opportunity to address this issue earlier in the year by introducing a ban on shooting white-fronted geese in Wales, Greenland white-fronted geese remain without legal protection here. What would in effect have been a relatively simple extension and legal underpinning of an existing voluntary initiative, a logical progression in efforts to conserve our natural heritage, may now be an opportunity lost.

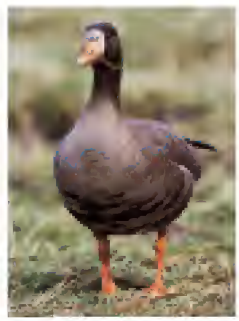
Back to the Dyfi and the flock on the estuary

The long-standing voluntary ban on hunting Greenland white-fronted geese by local wildfowling clubs on the Dyfi has been instrumental in protecting the birds there, and members of the Dyfi Wildfowl Management Advisory Panel are working to strengthen and extend this voluntary moratorium. Though the specific reasons for the decline in the global population remain unclear, there is a clear need to understand the pressures impacting on the population that winters in Wales, including the status and distribution of birds that semi-regularly occupy sites away from the Dyfi and the measures required to ensure their conservation.

At the time of writing, almost two weeks into November, only a few birds had returned to the estuary, a furtive family flock seen feeding on the saltmarsh at RSPB's Ynys-hir reserve. We hope to see the remainder of the flock return soon.

If you see any Greenland white-fronted geese anywhere in Wales this year, please get in touch and let us know. Tell us where and when and how many you've seen. Email us at **Cymru@rspb.org.uk** or call **02920 353 000**.

Stephen Bladwell *is Biodiversity Manager for RSPB Cymru.*



References

1. The Birds Directive lists *Anser albifrons* on Annex II/1 for the UK, meaning potentially both races may be a quarry species (within the UK). Due to their conservation status, the Wildlife & Countryside Act 1981 gave protection to all white-fronted geese in Scotland as a pragmatic way of protecting most Greenland white-fronted geese in their Scottish range. However, this left them as huntable species in England and Wales.

Rhieni arbennig

Mae'r boblogaeth gaeafu fwyaf deheuol o wyddau talcen-wyn yr Ynys Las yn y DU yn ymweld â moryd Dyfi yng nghanolbarth Cymru. Mae niferoedd yr ŵydd brin hon yn dirywio, ac mae angen ei diogelu mewn safleoedd gaeafu cymaint â rai bridio. Mae'r cyfle i roi iddi'r diogelwch cyfreithiol y mae'n ei haeddu wedi ei golli, ond mae yna waharddiad hela gwirfoddol mewn lle yn Dyfi. Mae CFGA yn croesawu gwybodaeth oddi wrth unrhyw un sy'n gweld talcen-gwyn yr Ynys Las rhywle yng Nghymru.

All photos: Mark Saunders

Pat O'Reilly

Thinking and Talking in the Trees – The Llais y Goedwig Gathering 2013

Community woodlands are a growing phenomenon in Wales, bringing innumerable benefits to people and wildlife. For almost a decade woodland community groups have operated under an umbrella group, which decided to hold an open-air gathering in 2013. It was a chance for woodland groups to share their stories and develop a common vision, as DAVID WILLIAMS reports.

Llais y Goedwig – the voice of community woodland groups in Wales – decided to hold its 2013 conference event and AGM actually in a woodland this year, so that the surroundings could help make the discussions real and 'alive'.

Given the unpredictability of the weather in Wales, it was a bit of a risk, but in the cold of November it seemed like a good idea!

Blaen Bran community woodland in Cwmbran was the venue, and arrangements were made to have a series of marquees and shelters to house the main conference event and refreshment areas. It was also agreed to make the second day of the conference a woodland open day, with a rage of different wood crafts and activities taking place, open to the wider public so that people could get an idea as to 'what goes on' in a woodland. The dates chosen were Friday 19th and Saturday 20th April.

The idea of the conference event was to highlight the wide range of

activities and work done in community woodlands and how these contribute to environmental management, to support local communities, and how they can make a practical contribution to local society through work and volunteering.

The keynote speaker was Dr Emyr Roberts, Chief Executive of Natural Resources Wales (NRW). There were also speakers from Welsh Government, from Cynnal Cymru, from Welsh Council for Voluntary Action (WCVA) and most importantly, from a number of community woodland groups across Wales – telling something of their story, where they had come from, what they were doing, and what they wanted to do.

Those coming to the event were welcomed by David Williams, Chair of Blaen Bran Community Woodland, and the local MP for Torfaen, the Right Hon Paul Murphy. A series of discussion groups – mostly in the open air – considered some key themes looking to the future. These covered:

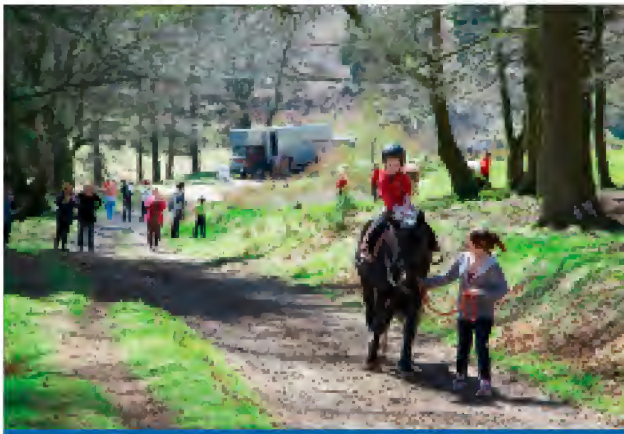
- Co-production – what is meant by it, how can it be done in practice?
- The third sector – what contribution community woodlands can make
- Sustainable development – what this means for woodlands and what is needed
- Relationship between the public forest estate and communities – how to take forward

Around 70 people attended the conference event, which was then followed by the business of the Llais y Goedwig AGM, where thanks were given to two of the original directors, Roger Davies and Jenny Wong, who were standing down and welcome given to two new nominated directors, Nick Perrin and Andrew Michie.

Open day

The day wasn't over yet however, as many from community woodlands across Wales had elected to stay over for the open day on the Saturday, and an impromptu campsite was set up in the woods, along with a large campfire and a bar with a couple of barrels of real ale (thanks to the Queen Inn in Upper Cwmbran).

Fortunately the Saturday also dawned bright, and



All ages can partake in what the woodlands have to offer

campfire breakfasts were followed by the welcoming of stall holders and the setting up of craft demonstrations in different parts of the wood, including a tree-felling demo, horse logging, use of a firewood processer and log splitter, carving and using a pole lathe, chainsaw sculpture, and making musical instruments. Forest school activities and a children's game were set for different times, and there were a number of guided walks – so it was a pretty packed programme, which had been planned out so that people could move from one to another. Stands from local organisations included Cwmbran Community Council, Torfaen Countryside team and Community Enterprise team, Friends of the Earth, Ancient Cwmbran Society, Twmbarlwm Society and the Welsh Perry and Cider society.

The fine weather meant that there was a steady flow of visitors through the day, with excellent work done by the car parking team including local army cadets. We estimate that in excess of 450 people visited the open day, and were greeted with the best weather of the year so far. The food stands had a field day – the pizza stand sold out, and the other caterers had never made as many Welsh cakes in one day!

Manifesto

Participants and visitors alike had an enjoyable and inspiring day – and told us so. But the event was also about looking ahead, highlighting the ways in which community woodlands can make a real contribution to a sustainable future. Llais y Goedwig launched its manifesto for community woodlands.

Community woodlands provide resources for small businesses

This has seven themes:

1. Community woodlands should contribute to a healthy and biodiverse landscape, creating sites where wild plants and animals can find a home and flourish, as well as being welcoming and accessible spaces for everyone to enjoy.

2. Community woodlands should provide materials and resources to meet local needs. This includes wood and non-wood products such as timber for milling, firewood, food products, seeds, moss, etc, as well as shaping woodland management to grow the resources we will need in the future.

3. Forests and woodlands should be able to make a contribution to sustainable local communities through tourism, recreation, leisure, life style and craft businesses (including social enterprises) and be places for the delivery of training and apprenticeship schemes for woodland skills.

4. Woodlands should connect people with the natural world, enabling people to experience wildlife in its natural habitat, develop a sense of place, and deepen our understanding of our place in the natural world.

5. Woodlands can be a focus for community wellbeing, with opportunities to explore local history and culture, to take part in activities that raise self-esteem and build confidence, and overall give opportunities for meeting people through participating in community activities.

6. Woodlands should contribute to learning and developing skills at a practical level, covering the management of woods for different purposes, such as training, learning and livelihoods and adding value to the forest or use of woodland resource.

7. Community woodlands should engage with civic society, informing decision makers about how the decisions they make impact on our activities, whilst recognising that sustainability is about more than our own communities.

Current concerns pertaining to community and woodland interests would include:

- statutory protection of the public forest estate
- use of revenues arising from use of public forest on development of the estate
- local consultation with encouragement for community involvement in the management of the public estate
- involvement in non-governmental organisation/Welsh Government debate and decision making.

Woodcarving display

Creating a woodland nymph

The two days of the Llais y Goedwig community woodland gathering were very much geared to demonstrating all seven aspects of the woodland manifesto (which can be found in full on the Llais y Goedwig website: llaisygoedwig.org.uk) – from direct engagement with decision makers, through to demonstrating a wide range of skills, giving scope to meet new people and participate in activities, and providing a sense of place outlining local history and culture.

Perhaps this was best exemplified in one specific activity on the day. The chainsaw sculptor started with a large log – from the woodland, part of a tree felled a few months before, and some of which had been milled to provide planks. From this he created a woodland nymph, with a watching and appreciative audience seeing it take shape before their own eyes. A craft skill was at work, engaging with people in a community woodland, and providing a visible contribution to the culture of a local woodland – highlighting that our cultural heritage continues to grow and develop if we nurture and support it. It was much appreciated as a parting gift by the Blaen Bran woodland group.

David Williams *was one of the founding directors of Blaen Bran Community Woodland in 2004, and remains an active member. He has been a Board member of Llais y Goedwig, the umbrella organisation for community woodlands in Wales, since being elected at the first AGM three years ago. His day job is in local government, and he lives in Cwmbran, Torfaen.*

Ymgynulliad Llais y Goedwig 2013

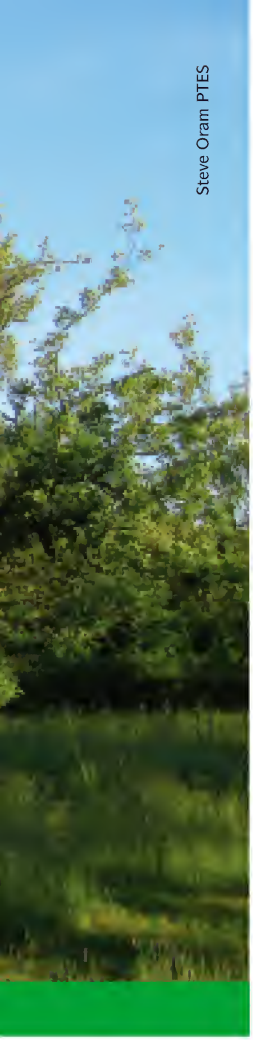
Mae coedlannau cymunedol ar gynnydd yng Nghymru. Eleni, cyfunwyd eu Cyfarfod Cyffredinol Blynyddol gyda Diwrnod Agored a arddangosodd y manteision lu y gall coetiroedd cymunedol eu dwyn i bobl a bywyd gwyllt. Mae coetiroedd yn darparu deunyddiau ac adnoddau ar gyfer anghenion lleol, fel cynhyrchion pren ac eraill, gweithgareddau ac addysg, cyfleoedd i ddysgu sgiliau newydd a lleoedd hygyrch i'w mwynhau gan bawb. Roedd hefyd yn ddiwrnod ar gyfer edrych ymlaen, gan ddwyn sylw at ddulliau gwneud cyfraniad gwirioneddol at ddyfodol cynaliadwy a meddwl am ffyrdd cadarnhaol o effeithio ar benderfynu.

Traditional orchards - *a new habitat map for Wales*

As natural habitats go, there are very few that are as inviting for people as they are for the wildlife they support. Traditional orchards are not only a great place to see woodpeckers and find rare beetles, they are an ideal space for quiet reflection and the source of probably our finest home-grown grub. ***STEVE ORAM*** *reports on a project to put Welsh orchards on the map and keep them alive in the landscape.*

It may not seem plausible that a field containing what is essentially a crop may in fact play host to a floral and faunal assemblage that can hold its own in comparison to ancient woodland. But that is exactly what a traditional orchard presents, a fact acknowledged in 2007 when it was given Priority Habitat status under the UK Biodiversity Action Plan (BAP). In a comprehensive ecological study of three orchards in Worcestershire (Smart & Winnall, 2006) 1868 species were recorded. These included vascular plants, bryophytes, fungi, lichens, vertebrates and invertebrates. The orchards were shown to host a number of nationally rare, scarce, or declining species and some that appeared on conservation watch lists as having high levels of vulnerability in the wild.

Orchards and fruit trees are a diverse subject combining elements of habitat, crop, woodland, amenity, and garden. They are a mosaic of fruit trees, scrub, hedgerows, hedgerow trees, orchard floor habitats, fallen deadwood and other habitats such as ponds. They have become culturally enriched through centuries of agricultural and horticultural


Steve Oram PTES

history and are a well-established element of the British landscape. But this reluctance to be pigeon-holed makes a precise definition of the traditional orchard habitat problematic. It's simpler to explain what it isn't, i.e. any orchard with trees growing on short-lived dwarfing rootstocks or that is treated with chemicals. Unfortunately, most modern productive orchards meet both of these criteria making them easy to spot and biologically uninteresting, although there are scant few of these in Wales. Several categories of orchard exist that are only partially excluded from the definition, so are considered marginal habitats. Less than five trees, for example, would be considered a relict site. In the case of organically managed modern orchards with dwarfing trees, it's accepted that the lifespan of the trees will be curtailed, but the benefit of organic management to wildlife is not fully known so such sites are still recorded. Diametrically aligned to this are large, long-lived, often ageing standard trees that are treated with some chemicals, such as sward removal with herbicides. These cases cannot be thought of as prime traditional orchard habitat, but all are potentially biodiverse to some extent, and in the case of the relicts and standard trees, good candidates for habitat restoration.

Mapping the habitat

Ecologists at conservation charity People's Trust for Endangered Species (PTES) have been involved with traditional orchards since 2005. This started when we took a prominent role in the conservation of the Noble Chafer Beetle (*Gnorimus nobilis*), a red list BAP species that, in the UK, lives almost exclusively in old fruit trees. This made us the natural partner when it came to running a mapping project in the main fruit-growing regions of England. Since then we have mapped the whole of England and Wales and are guiding the process in Scotland. The last piece of the jigsaw will be Northern Ireland which will complete the set, creating a fully compatible centrally administered United Kingdom habitat inventory.

Using GIS tools, Ordnance Survey data, aerial imagery, a bespoke Data Capture Tool, and not a little elbow grease, we analysed every square foot of land looking for the presence of traditionally managed orchards. Ideally every site would be visited on the ground to be verified, but with 7,363 in Wales alone, this is not a realistic goal. We have so far managed to verify 20% with the help of 128 local volunteers, and continue to recruit, survey, and improve the map. We provide volunteers and owners with paper or electronic forms, and have just released a mobile phone 'app' which we hope will increase participation and reduce costs.

Biodiversity

Site visits by volunteers and information supplied directly from owners enables us to assess habitat condition – which is where things begin to get thorny. A traditional orchard condition assessment will mean different things according to the audience. One might reasonably assume it was an assessment of the condition of an orchard, but really it has little to do with the horticultural entity that is an orchard or the quality of the crop. Instead it is a combined calculation based on habitat potential and management practices, foremost

Matt Smith

Noble chafer beetle *Gnorimus nobilis*

Table 1

Principal Areas	Totals					Agri-environment	
	Total area traditional orchard (ha)	Total area including marginal sites (ha)	Number of sites	...including marginal sites	Average size	Sites in agri-env (2013 data)	Hectares
Blaenau Gwent	0.0	0.2	5	4	0.06	0	0.00
Bridgend	2.6	4.2	43	104	0.04	3	0.73
Caerphilly	2.0	5.0	46	87	0.08	0	0.00
Cardiff	2.0	3.3	39	50	0.07	1	0.04
Carmarthenshire	39.7	50.2	474	880	0.06	95	12.48
Ceredigion	22.7	27.9	374	513	0.05	55	6.23
Conwy	10.3	13.3	353	232	0.08	12	0.90
Denbighshire	18.4	32.5	555	596	0.05	2	0.12
Flintshire	17.4	29.2	411	772	0.03	2	0.71
Gwynedd	17.0	33.6	350	431	0.08	29	3.54
Isle of Anglesey	9.8	17.5	393	347	0.05	13	0.78
Merthyr Tydfil	0.4	0.6	9	18	0.03	0	0.00
Monmouthshire	209.3	452.4	693	892	0.53	67	27.07
Neath Port Talbot	1.9	3.1	33	95	0.03	5	0.37
Newport	24.8	40.4	87	124	0.33	1	0.58
Pembrokeshire	21.2	24.8	340	367	0.14	56	8.03
Powys	175.7	223.6	756	1007	0.23	94	32.93
Rhondda Cynon Taff	2.8	4.0	58	126	0.03	3	0.26
Swansea	17.1	39.8	176	282	0.07	21	2.13
Torfaen	5.6	6.5	38	38	0.17	0	0.00
Vale of Glamorgan	15.3	22.4	171	451	0.06	9	1.26
Wrexham	17.0	31.3	214	267	0.12	7	1.35
TOTAL	653.1	1007.3	4687	7363	0.14	472	99.51

among them being whether or not there are young trees present: lack of replacement planting is the single greatest threat to the habitat in the long term. Also important is the presence of dead wood. One of the habitat's greatest assets is its appeal to saproxylic species, of which our aforementioned Noble Chafer is one. To maximise biodiversity potential there will be dead wood lying on the ground and left standing: but no self-respecting orchardist will leave potentially diseased wood sitting around in his orchard, and as for a commercial enterprise, aside from impeding access, it doesn't exactly scream of a tightly run ship. However, fruit trees are special in that they develop veteran features at a fraction of the age many native species do, such as ash, oak and beech. Most fruit trees are likely to be developing decay in holes by the time they reach half a century, at which age many other trees would be little more than whippersnappers.

The characteristic premature ageing is a blessing and a curse. The interior decaying wood, which more often than not starts at pruning scars or where branches have been shed, goes through the framework down the trunk, eventually reaching the roots, fulfilling the deadwood pre-requisite of the habitat, whilst remaining more or less out of sight. By decaying from the centre outward the tree transforms from a cylinder into a pipe, an innately stronger Euclidean structure, that introduces the potential for the tree to 'sway' in high winds, reducing the likelihood of wind-throw and prolonging the life of the tree. The dark side of early ageing is that observable signs of decay, although often fairly superficial, indeed beneficial, are easy to mistake for signs that a tree is moribund. This makes it less valued and thus vulnerable to the chainsaw.

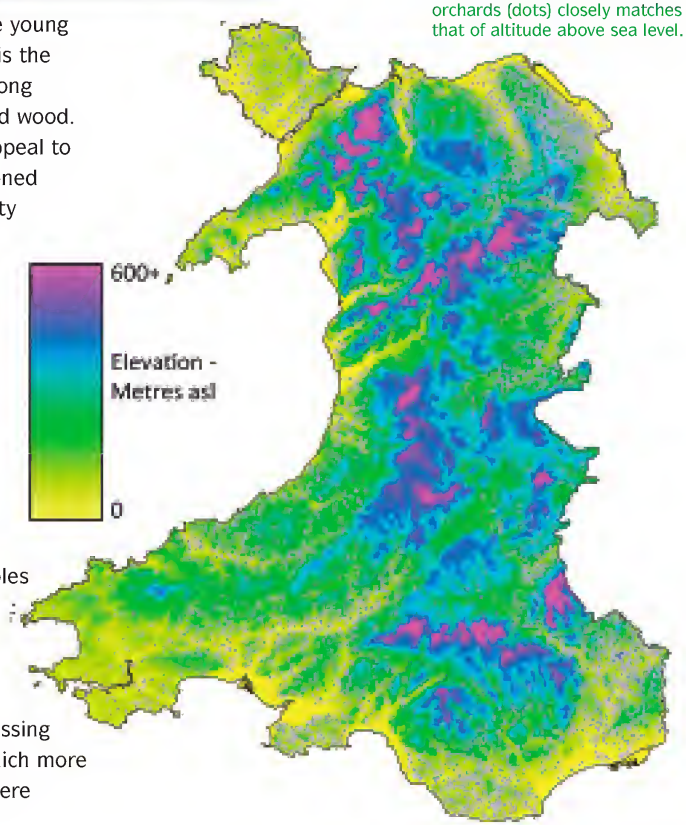


Figure 1: Distribution of orchards (dots) closely matches that of altitude above sea level.

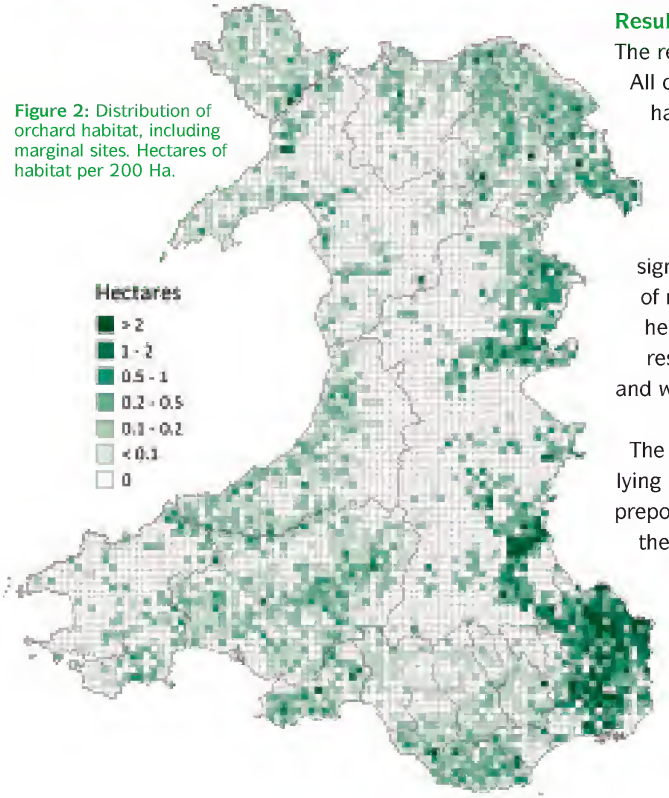


Figure 2: Distribution of orchard habitat, including marginal sites. Hectares of habitat per 200 Ha.

Results

The results of our project are summarised in Table 1. All data is presented with results for the strict habitat definition on the left followed by the same figure but with marginal sites included. It can be seen that there are 57% more sites when the marginal ones are included (containing 59% more acreage). This is a significant area and warrants further investigation of marginal habitat biodiversity potential and will help conservation bodies locate sites for restoration and agri-environment schemes where and when there is funding.

The distribution of the habitat strongly favours low-lying land (Figures 1 and 2). There is a clear preponderance of habitat along the eastern border of the country, but significant areas elsewhere, primarily the Vale of Glamorgan, the Gower Peninsula, mid-Carmarthenshire, west Ceredigion, northwest Gwynedd and Anglesey, and north Conwy. This more or less covers the lowest-lying areas with the exception of very low-lying floodplains such as Carmarthen Bay and Estuaries, and the

sparsely populated and exposed land of north Pembrokeshire. The highest recorded orchard is found at 415 m (1362 ft.), but the vast majority occur below 200 metres, with only 14% occurring above that and 2% above 300m.

Dead wood, an invaluable habitat for wildlife

Where we assessed orchard condition, an average of 7% were considered to be in 'excellent' condition. Few orchards, even those managed very well as productive orchards, will meet all of the criteria to achieve this highest rank, as an excellent orchard must have both new planting and deadwood habitats. The majority, 58%, fall into the 'good' category, showing that most orchards are under some sort of management (65% when 'excellent' and 'good' are combined). Those orchards falling into the 'poor' category (35%) will generally not be in current management or have grazing damage to the trees, indicating failing management practices. There appears to be a general bias of better quality habitat in the north of the country. This graph excludes principal areas that have too few results to be reliably representative. It is interesting to note that orchards within an agri-environment scheme are more than three times as likely to be in 'excellent' condition as the average orchard, but this appears to have been accomplished as much by improving already 'good' orchards as pulling the 'poor' ones up by their bootstraps. It is also worth considering that condition assessments derived from orchard owner information may positively skew the data, since those who care for and manage their orchards are more likely to return forms to us.

Challenges and opportunities

Orchard habitat loss has occurred on a national scale. The agricultural census estimates that between 1958 and 1992 there was a 94% reduction in area of orchards in Wales (TACP 1994), both traditional and intensive (although the distinction gets fuzzy further back), driven mostly by the economics of foreign fruit imports. Continuing losses in Wales are more down to neglect and land development pressure, but strong data for this is not yet available. Orchards as a community greenspace are a fashionable choice for communities, and many new orchards are being planted as a result. As we monitor losses and gains and revise the habitat inventory, we will learn more about challenges to the habitat and areas of opportunity.

The last 20 years finally saw the end of payments to grub out orchards and hedgerows and to intensify, and a veritable u-turn to agri-environment schemes that, conversely, pay farmers to plant, conserve and sympathetically manage their land, including traditional orchards. Whilst not a 'forever' answer, they serve a valuable purpose: since participant land-owners and farmers have little choice but to earn a living off their land the schemes have saved some of the most vulnerable and important sites, and enabled areas of conservation priority to be identified.

A good number of owners are finding new ways of adding value to their crop, be it cashing in on the resurgence of cider and perry (ironically spearheaded by a product that barely resembles traditional British cider), or value-adding on-site rather than relying solely on fruit sales. Some businesses use fruit collected from a number of different orchards and don't grow any fruit themselves. A major area of growth is in community orchards. Some of these are old orchards saved from the chop by locals who then take on management, but most are newly planted as community greenspace.

Future work – varieties collections

Many local and rare heritage varieties of apple, pear and plum and other fruit are scattered around the country. Work is in progress to develop a UK map of fruit variety distribution based primarily on

information gathered during the inventory projects, and to correlate this with availability. This could be a list of nurseries that stock a required variety, or museum orchards and groups that make scion wood available for free. With this information we will be able to see which cultivars are critically endangered and build a database of sites holding verified cultivars – often the only current verified site is in the National Fruit Collection at Brogdale. Although it may well be that several more examples of a rare cultivar are known to exist outside of a verified collection, it has to be assumed that once a tree leaves the nursery it is essentially lost, since records are rarely kept and their fate is unknown.

Relocating lost varieties is a very hit and miss affair. We aim to ensure that known sites for each variety do not fall below six, and if they do, that we can locate a replacement record in a timely fashion. This network of local collections, single specimen trees, community projects and museum orchards could be used for scientific studies of the sort that can only be done outside of the core collection at Brogdale, such as pest and disease monitoring, dispersed phenological studies and the effect that climate change is having on fruit crops. Aside from providing an insurance policy for the national collection, these projects will be a valuable tool in the effort to preserve and revive heritage varieties of fruit, and could contribute to nationally important agricultural programmes. Check the websites soon to find updates on these projects.

Summary

Our project has not only been about creating a habitat map: we have increased awareness of traditional orchards and the fruit therein, helped preserve threatened sites, provided advice and help for orchard owners and those setting up new projects and orchards, and, through our work with Orchard Network, become the national hub for the habitat. The Orchard Network is a group of interested parties that started off as the Habitat Action Plan steering group and includes representatives from UK statutory governmental bodies, the National Trust, a number of conservation charities, and industry. Together we plan to keep fighting for what remains of this most agreeable of habitats.

PTES

Fruit trees age more quickly than forest trees such as oak and ash

Steve Oram *is Orchard Biodiversity Officer, People's Trust for Endangered Species*

References

1. The habitat map can be viewed online at www.ptes.org/orchards and will be available to download in various formats including full GIS polygon data from the newly formed Natural Resources Wales
2. Smart, M. J. & Winnall, R. A., 2006. *The biodiversity of three traditional orchards within the Wyre Forest SSSI in Worcestershire: a survey by the Wyre Forest Study Group.* English Nature Research Reports, No 707.
3. TACP, 1994. *Orchards in Wales.* Countryside Council for Wales Policy Research Report No 94/5.
4. *Natural Environment Framework Narrative 5.* Welsh Government
5. www.orchardnetwork.org.uk
6. http://www.nationalfruitcollection.org.uk

Perllannau traddodiadol

Mae perllannau'n fannau llawn diddordeb diwylliannol ac amrywiaeth naturiol mawr. Dônt yn gynefinoedd bioamrywiol pan yn gymharol ifanc, yn fannau y tâl ymweld â nhw, ac yn gynhyrchwyr llawer o wahanol fathau o afalau a ffrwythau eraill. Eto, prinhau y maent. Mae cynllun canfod lle mae'r perllannau sy'n weddill, a llunio map cynefinoedd perllannol newydd, wrthi'n ddygn yn ceisio'u cadw nhw'n fyw yn y dirwedd.

Liz Flemming-Williams

Golden plover - *harnessing modern technology*

A characteristic and appealing bird of the Welsh uplands, the golden plover is in trouble. Finding out what changes in the environment may be responsible for this decline, and understanding more about the behaviour and needs of a very mobile species, is far from easy. However, new technology, allied to old-fashioned fieldwork, may provide some answers, as MICK GREEN, HEATHER CRUMP, TONY CROSS and PAUL LEAFE explain.

Golden plover (*Pluvialis apricaria* - Cornillod aur) in the Cambrian mountain uplands

Golden plover *Pluvialis apricaria* are one of those species whose presence signifies a sense of place – in their case the rolling uplands – and they were once relatively abundant in areas such as the Elan Valley, high in the Cambrian Mountains in mid-Wales. Since baseline surveys were undertaken by the Nature Conservancy Council (NCC) in the 1980s, breeding golden plover populations have reduced by over 80%, and just 36 breeding pairs were found in Wales in 2007. Reasons for the decline are unclear, and causes that have been put forward include afforestation in the uplands, unsuitable grazing pressures (both over- and under-grazing), changes in wintering habitats or locations, and changing climate. The likelihood is that it is a combination of reasons, making it very difficult to tease out and to suggest viable conservation action.

The lack of historical data, both ornithological and especially botanical, makes the reasons and timing of this contraction hard to identify accurately. Although we have

enough breeding bird data to show declines since the 1980s we do not have a detailed time series to show if it was a gradual decline or a sudden drop sometime along the way. Anecdotal evidence does suggest a fairly sudden drop in the 1990s, though this is not backed up by clear data. Likewise, we have very little historical data to show changes in vegetation, wetness and other environmental parameters.

Changes to wintering birds are even harder to understand. Whilst research and surveys have been undertaken on the breeding grounds, there appears to be little research into the needs of wintering birds across Wales. Birds wintering on sites such as estuaries are monitored by Wetland Bird Survey (WEBs) counts, but inland wintering birds using farmland are not generally monitored. Monitoring of these flocks is very difficult as they are constantly moving and their habitat requirements are not well known. Plovers wintering in Wales are known to have originated, at least in part, from Northern and Eastern Europe, although ringing recoveries are few. It is also not known where Wales's breeding birds winter and although the general UK wintering population appears to have moved east during a series of mild winters, recent cold winters may have reversed that trend.

Technology to the rescue

Two new studies are underway in Wales which hope to throw light on the plight of the golden plover. Both use a combination of new technology, state-of the art computer analysis and old-fashioned fieldwork.

Study 1 – Assessing the vegetation

This study involves new remote sensing and Geographical Information System (GIS) technologies that can help make the best of the limited information we have on past vegetation and other environmental conditions, initially focussed on the breeding grounds. It is possible to assess the past environment and use this information to help understand landscape changes in relation to golden plover numbers.

Using a combination of traditional bird surveys and remote sensing, the study aims to see if subtle land-use changes are likely to be one of the causes of declines. Two study areas were chosen where we had data from the 1980s NCC surveys – Plynlimon SSSI and parts of the Elenydd SSSI. As both of these sites are SSSIs, they have not been subjected to significant drainage and agricultural improvement, and any afforestation is on the outside edge of the SSSI boundary. Regular monitoring visits to the sites, over many years, suggest that the vegetation of these areas has not changed.

Chris Gomersall RSPBimages.com

Golden plover *Pluvialis apricaria*

Both sites were re-surveyed for breeding birds in the Spring of 2011 and 2012, using the same transect survey methods used in the original surveys, and the results showed the populations of golden plover on both sites has dramatically reduced over the last 30 years. Populations on the Plynlimon SSSI are close to local extinction.

Table 1: *Changes to golden plover populations between original NCC surveys (Elenydd 1982; Plynlimon 1984) and repeat surveys (Elenydd 2012; Plynlimon 2011).*

Site	1982/1984	2011/2012	Change (%)
Elenydd (Trumau)	14	4	- 71
Plynlimon SSSI	13	1	- 92

The study looked at environmental change which could help us to understand the declines. Remotely sensed satellite images reveal aspects of the

environment and smaller changes that may not have been identified by eye. In addition, it is possible to create a time-series of imagery to look at vegetation over the sites, as satellite imagery is available back to the late 1970s. This enables us to assess past conditions of the sites in relation to their current condition. In effect, the new technology allows us to undertake vegetation surveys in the past. It is also possible to look at more detailed environmental conditions, such as wetness and productivity of the sites. Any alterations to these conditions could highlight reasons for changes in golden plover populations.

Initial results from Plynlimon appear to confirm our feeling that there haven't been any major vegetation changes over the site. Work on classifying the Elenydd sites continues, concentrating on whether or not *Molinia* has spread and become more dominant. There have been concerns that the area is now undergrazed and this may be making habitat unsuitable for plovers. However, given that the plovers declined before the grazing levels dropped, this may not be the case and we hope this study will shed more light on the long term trends across the site and help inform future management strategies.

Study 2 - Tracking golden plovers

The second project also involves satellites, but uses them to track golden plover themselves, rather than their habitat. Again, it also involves good natural history fieldwork to locate birds in the first place, with traditional catching and ringing techniques to colour-ring birds, and finally fitting satellite transmitters.

A colour-ringing project, developed by Tony Cross and Paul Leafe in winter 2011/12, showed that it was practical to catch and mark significant numbers of birds by 'lamping' at night. However, re-sightings of birds were few, partly because funding did not allow us to spend a significant amount of time in the field, and also because of the mobile nature of the flocks.

The colour-ringing continued through winter 2012/13. In order to capitalise on the large numbers of marked birds, funding was obtained to substantially increase survey effort. A large area of mid Wales was surveyed on a regular basis. Flocks were counted whenever possible, and scanned for colour rings. The location of each flock was recorded along with a description of the habitat used, as well as adjacent habitats. The ringing involved work at night which gave further information on flocks, as it was found they used different fields at night – golden plover tend to feed at night and roost during the day.

In addition, two birds were fitted with harness-mounted, solar-powered satellite tags which sit neatly on the back of the bird and allow daily movements to be plotted. The first bird – 'Ceri' – was tagged in November 2012, followed by 'Hawn' in January 2013.

The winter of 2012/13 turned out to be cold with extensive snowfall across mid Wales. A total of 88 sightings were made during the period September 2012 to the beginning of March 2013. Sighting numbers were low, and most sightings were at night. The area held many fewer birds than in previous winters. Although birds started to arrive in the area at the start of the study, with the onset of cold weather on the 9th December most birds left the area. Although a few returned in early January, a further cold spell resulted in birds once again leaving the area.

Two different stories

The satellite tagging showed exactly how mobile the birds are. Following her tagging on 24th November, Ceri was still in the same field on 5th December, but by 11th December she turned up in Spain, just to the south east of Madrid. She then moved to the Spanish-Portuguese border by 15th January and the last transmission received towards the end of that month was still from the same area.

Magnus von Wright

Hawn meanwhile showed a different reaction to cold weather. Following tagging on 5th January, by the 16th she was on the coast between Pembrey and Carmarthen. On 12th February she returned to her ringing site but did not stay long at all and returned to South Wales, moving between several sites. She returned again to her

IMPORTANT REQUEST:
The colour-ringing project is continuing in Winter 2013-14. Please check any golden plovers you see and report any marked birds. Even if you aren't able to read the colour combination, general records of marked birds are still very valuable. Please note grid reference and if possible size of flock containing the ringed bird, along with the habitat. Please send records to: plovers@ecologymatters.co.uk or 01970 832491 – Thank You.

ringing area on 10th April and we stopped receiving signals soon afterwards. We have also received records of other colour-ringed birds and will be looking at all movements in due course.

The satellite tracking shows two very different reactions to cold weather – either leave the Country completely or make shorter movements for a temporary respite. That Hawn seemed to want to return to the ringing area indicates that conditions there, in warmer weather, must be attractive. All the movements highlight the very mobile nature of golden plover flocks and the difficulty in protecting their habitat. The traditional method of designating key sites will obviously not work if these sites depend on current weather conditions. We need to know a lot more about how these birds use the wider landscape and if there are key sites that can be protected to provide enough areas for safe overwintering, or if new strategies are required.

One ringed bird has just been recovered from Cornwall – it was shot dead. This highlights the absurd situation where golden plovers are on the 'Red List' of birds of Conservation Concern in Wales (Amber list, UK) but are still on the legal quarry list.

These studies, in very different ways, show how new technologies can complement traditional fieldwork to try to help us to understand why golden plover and other species are in such dire straits. Both studies are continuing, and more results should be available over the next year. However, it is important that new scientific finds are quickly incorporated into action on the ground so that we can reclaim that sense of

Tony Cross

Colour-ringed golden plover

place. Unless we have some real action then we are all wasting our time!

__Mick Green__ and __Tony Cross are__ Directors of Ecology Matters, __Heather Crump__ is a final year PhD student at Aberystwyth University and __Paul Leafe__ is a ringer based in Montgomeryshire.

Acknowledgments
The breeding season project was funded as part of a KESS studentship at Aberystwyth University with support from Ecology Matters. The winter ringing project was supported by a grant from Ecology Matters, with the satellite tagging and re-sightings surveys supported by a separate grant from the Welsh Government Ecosystem Resilience and Diversity Fund.

Y Cornicyll Aur: defnyddio technoleg newydd

Mae'r cornicyll aur yn rhan annatod o ucheldir Cymru, ond mae eu niferoedd yn disgyn yn gyflym. Mae dwy astudiaeth wedi bod yn ceisio dod o hyd i reswm am y dirywiad. Defnyddiwyd technoleg lloeren yn gyntaf i archwilio newidiadau lleiaf i'r amgylchedd a allai fod wedi effeithio ar lwyddiant bridio, er nad yw'n ymddangos fod newid y cynefin yn darparu'r ateb. Mae'r ail hefyd wedi defnyddio technoleg lloeren, y tro hwn i ddilyn adar wedi'u marcio yn ystod y gaeaf. Mae hyn wedi datgelu symudiadau unigolion, a pha mor hawdd yw iddynt gael eu saethu. Mae'r gwaith yn parhau, ac fe ofynnir am adroddiadau am adar wedi'u marcio.

Y Styrsiwn yng Nghymru

Aah-Yeah Creative Commons 2.0 Generic

Dim ond yn achlysurol y bydd styrsiwn yn dod i'r golwg yng Nghymru, ond pan gaiff un o'r pysgod hyn ei ddal mae'n ddigwyddiad nodedig ac fel rheol yn bachu sylw'r papurau newyddion lleol a chenedlaethol. Yma mae ***DUNCAN BROWN****, cydlynydd y prosiect Llên Natur sy'n annog pobl i gofnodi agweddau ar fywyd gwyllt a'r amgylchedd naturiol a hefyd yn ymchwilio ac yn dehongli cofnodion, yn cymryd cipolwg ar styrsiynod Cymru drwy hanesion a straeon gan unigolion a phapurau newydd.*

Dau ddigwyddiad diddorol diweddar sydd wedi ysgogi'r erthygl hon: yn gyntaf, y styrsiwn a ddaliwyd yn Noc Penfro ym mis Medi 2013[1] ac yn ail, cyhoeddi gwasanaeth chwilio papurau newydd y Llyfrgell Genedlaethol (LlGC) Ilynedd[2]. Mae'r gwasanaeth hwn yn hwyluso gwaith ymchwil ar nifer o rywogaethau prin, ac mae'n adnodd gwerthfawr i'r rhai sydd am olrhain hanes elfennau o'r maes amgylcheddol yng Nghymru. Yn y papurau newyddion Cymreig (o'r cyfnod 1804-1919) a oedd wedi cael eu sganio i fyny at ganol Medi eleni, ac felly ar gael i'w harchwilio drwy'r gwasanaeth hwn darganfuwyd 76 cofnod o styrsiynod. Mae'r ymdriniaeth hon yn tynnu'n fawr ar y wybodaeth yn y cofnodion hyn, ond daw rhagor o dystiolaeth i'r golwg yn ddiau wrth i'r gwaith sganio papurau newyddion fynd yn ei flaen. Mae Ffigwr 1 yn dangos tueddiad cryf o gynydd yn yr adroddiadau gyda threigl y 19g. Gallai hyn olygu a) diddordeb cynyddol mewn styrsiynnod gan y wasg, b) cynnydd yn y nifer o bysgotwyr, neu c) cynnydd yn y nifer o styrsiynnod. Amser, a mwy o waith, a ddengys.

1. Y "ffosil byw" prin

Mae teulu'r styrsiynod (yr Acipenseridae) wedi parhau, i bob pwrpas, yn

ddigyfnewid ar eu ffurf presennol am gan miliwn o flynyddoedd. Heddiw mae oddeutu pump ar hugain o rywogaethau yn cynrychioli teulu'r Acipenseridae ar draws y byd, ond dim ond un ohonynt, sef *Acipenser sturio*, sydd yn digwydd, yn y cyfnod modern o leiaf, ar hyd arfordiroedd gogledd yr Iwerydd[5]. Ar un adeg roedd hwn i'w ganfod, fel pysgodyn epilgar, ar hyd arfordir Ewrop - o'r Baltig yn y gogledd i Fôr y Canoldir yn y de. Heddiw mae'n gyfyngedig i aber yr afon Gironde yn Ffrainc, y Guadalquivir yn Sbaen a'r afon Donwy (Danube). Ers y Canol Oesoedd bu'r styrsiwn yn nodedig am ei faint, ei ffurf, ei gig a'i wyau (cafiâr) amheuthun, i'r graddau bod hawl honedig gan y sofraniaeth i bob styrsiwn y deyrnas, er mai mympwyol iawn y gweithredid yr hawl honno wrth i amser fynd yn ei flaen.

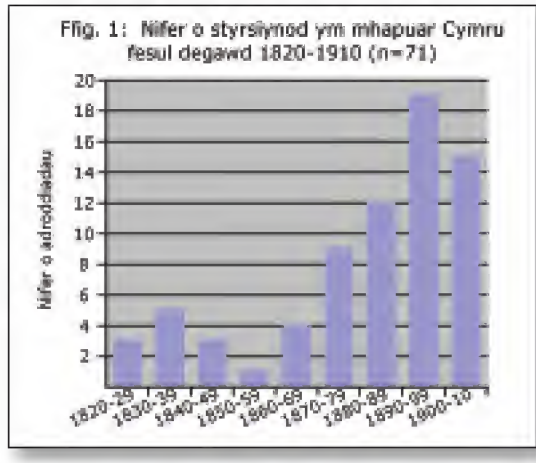
2. Ystadegau Styrsiynod Cymru 1800-1910

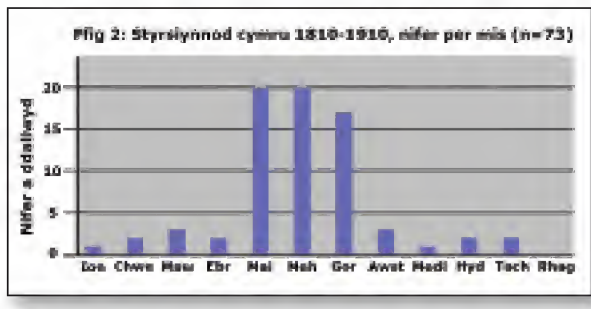
Yn seiliedig ar adroddiadau papurau newydd

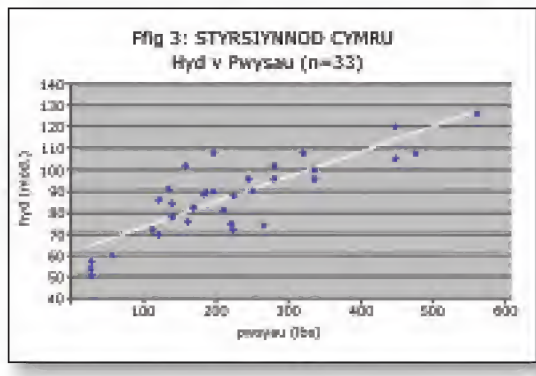
Roedd papurau newyddion lleol yn y 19egG yn dra gwahanol i rai heddiw o ran eu dull o gyflwyno. Roedd copïo straeon o un papur i'r llall yn rhemp ac roedd papurau lleol fel y *Cardiff and Merthyr Guardian*, y *Glamorgan, Monmouth and Brecon Gazette* yr un mor debygol o gofnodi styrsiwn o Gaint, neu'r Alban neu Ganada ag o gofnodi styrsiwn yng Nghymru.

Yn y cyfnod dan sylw cofnodwyd styrsiynod ar hyd arfordir Cymru, yn y de, y canolbarth a'r gogledd, yn ddiwahan fel pe baent yn rhan o boblogaeth denau'n mudo tua'r gogledd ar ffrynt eang. Cafwyd hyd iddynt mewn tri math o gynefin, sef aberoedd y prif afonydd, y môr agored cyfagos a'r afonydd eu hunain. Mae'n bosib mai adlewyrchu, i ryw raddau, y nifer o bysgotwyr ac nid nifer y styrsiynod y mae'r ystadegau.

Cafodd tri chwarter y styrsiynod eu dal ym misoedd yr haf cynnar, ym mis Mai, Mehefin a Gorffennaf, gyda'r niferoedd yn gwanhau o fis Awst ymlaen (Ffig. 2). Nid oes llawer o son am y cafiâr; ar y cig amheuthun y mae'r straeon yn canolbwyntio gan amlaf. Felly mae'n anodd barnu cyflwr y pysgod, ond mae lleoliad llawer ohonynt ar ddyfroedd eithaf uchel rhai o'r afonydd yn awgrymu bwriad i gladdu wyau (gyda pha obaith o lwyddiant sy'n fater arall). Un eithriad i hyn yw'r hanesyn (gweler isod) o







styrsiwn yn y 1920au yn bwrw ei wyau "fel llaid" ar y buarth ond ni cheir dyddiad na thymor.

Amrywient o ran maint ac roedd cydberthyniad agos rhwng eu pwysau a'u hyd (Ffig. 3).

3. Sut y Daliwyd y Styrsiynod

Daliwyd y styrsiynod trwy dri phrif ddull o bysgota. Dyma enghreifftiau:

i. Rhwydi wrth longau pysgota ar y môr
Yn aml roedd pysgod-werthwyr lleol yn rhedeg eu cychod rhwydo eog eu hunain i gyflenwi eu siopau.

O'r 'Cambrian', 26 Mehefin 1819:
Sturgeon .... A smaller fish of the same species, about 70lbs. weight, was also caught in [Swansea] Bay on Tuesday evening [23 Mehefin]..... Both were taken by boats belonging to Radford and Co. fishmongers of Swansea.

O'r 'Cardiff and Merthyr Guardian, Glamorgan, Monmouth, and Brecon Gazette', 3 Mehefin 1871
MONSTER STURGEON.—A sturgeon weighing one hundred weight and three-quarters, and measuring between seven and eight feet, was caught in the Dee last Tuesday. The fisherman broke a new net in doing so, and was greatly disappointed, having anticipated a good haul of salmon. Another sturgeon, almost equally large, was caught the previous week, and a publican, being desirous of affording an extra treat to the yeomanry quartered upon him, purchased a piece of the big fish and had it dressed, stuffed, and cooked a la fillet of veal, which was done so skilfully that his guests could not tell the difference.

ii. Rhwydi pysgotwyr eog yn yr aberoedd
O'r 'Llangollen Advertiser, Denbighshire, Merionethshire and North Wales Journal' (1860-1893), 10 Mehefin 1870
FLINT. A ROYAL FISH CAPTURED... a splendid sturgeon, weighing upwards of 100 lbs. was caught in the Dee, by two fishermen named Foulkes and Bithell. Twelve years have elapsed since a 'royal fish' was previously captured in this river, and we are told that the fishermen made a nice thing out of their prize.

iii. Rhwydi'r cyrglwyr ar afonydd y de
O'r 'Cambrian', 18 Mai 1839
A sturgeon, of considerable weight, was, on Tuesday, caught in the river Towy, Carmarthenshire, by the coracle fishermen. It appeared evidently to have been attacked by some more voracious fish, as part of one gill had been torn off, and several wounds appeared on the back. Our correspondent saw it alive at Carmarthen market some hours after it had been taken.

Weithiau cafwyd nifer o styrsiynod yr un pryd:

O'r 'Cambrian', 27 Medi 1878
....Several sturgeon and a cuttle fish had been captured in the nets and one salmon of 501b [Severn]

4. Agweddau Cymdeithasol
Tynged y styrsiynod yn aml oedd addurno llechfaen oer y pysgod-werthwr lleol, neu cael eu hawlio a'u rhoi i weision y brenin neu frenhines

O'r 'Cambrian', 25 Mehefin 1836
A sturgeon, upwards of 120 lbs. weight, was this week caught in the river Towy, between Carmarthen and the Ferry-Side, and exhibited to the gaze of the curious at the fish-market in the above town.

O'r 'North Wales Express', 28 Tachwedd 1890:
A large sturgeon was caught this week in Carnarvon Bay, and is exhibited at the shop of Mr Uriah Heard [mae'n debyg mai capten ar ei gwch pysgota ei hun oedd Uriah Heard], *in High-street, Carnarvon.* (Mae cwmni teuluol Heard-Hughes yn masnachu pysgod o hyd yng Nghaernarfon).

Ond ambell waith, siomedig a llugoer oedd yr ymateb:

O'r 'Pembrokeshire Herald and General Advertiser', 28 Mehefin 1861:
A PROFITLESS EXHIBITION.—Last week as some fishermen were following their avocation near the mouth of the Haven, they captured a very fine

sturgeon, which they conveyed to Pembroke Dock, and sent the town crier round to announce that it was for exhibition at Mr Conchar's, at the low price of one penny, but so inert were the inhabitants that neither the exhibition or the low charge, could excite their curiosity...

Tynged styrsiynod eraill oedd addurno bwrdd brenin neu'r frenhines y dydd.

O'r 'Cardiff and Merthyr Guardian, Glamorgan, Monmouth, and Brecon Gazette', 13 Mai 1864:
NEWPORT.—AN IMMENSE STURGEON.—An immense sturgeon was caught... about five miles from Newport. It measured from the nose to the tail seven feet one inch, and weighed 1261bs. The monster was exhibited in the window of Mr. E. Fennell, fishmonger, High-street, and it being a royal fish was sent on Saturday to his Royal Highness the Prince of Wales..

O'r 'Aberystwyth Observer', 13 Mai 1876
A STURGEON CAPTURED IN THE WYE.— A sturgeon 7ft. 8in. long, and weighing 1 cwt. 2 qrs. 191bs., was caught last week in the Wye, at the new weir, just below the Symond`s Yat station of the Ross and Monmouth railway, a point 10 or 12 miles above the tideway. Some eight years or more have elapsed since a similar capture was made, at a point, however, about seven miles higher up the river. The monster fish arrived at Windsor by Great Western train on Friday morning last, and was taken to the Castle upon its arrival, having been presented to the Queen.

O'r 'Dydd', 6 Mehefin 1890
DAL STURGEON YN Y DYFRDWY. Math o forbysgodyn yw y sturgeon, a daliwyd un o honynt yn y Dyfrdwy y dydd arall gan ddau bysgotwr. Yr oedd y pysgodyn, yr hwn oedd yn enghraifft ardderchog o`r sturgeon, yn 43 modfedd o gylchfesur, ac heb fod yn llai na 7 troedfedd o hyd. Trosglwyddwyd ef drosodd i swyddogion y Cyllid-dy, y rhai a'i hanfonasant yn anrheg i'r Frenhines yn Balmoral.

Mae'r gyfraith ar hyn o bryd yn rhoi'r cyfrifoldeb am y Pysgod Brenhinol (morfilod, dolffiniaid, llamhidyddion a styrsiynod) i'r Derbynydd Broc Môr (Receiver of Wreck). Ei ddyletswydd yw prosesu adroddiadau am froc môr, meddiannu'r broc a'i rannu er budd y sawl a'i cafwyd a'r perchen (y Goron). Ysgogodd gryn ddadlau ar y pryd yn achos y styrsiwn a ddaliwyd ym Mae Abertawe yn 2004 ac a werthwyd gan y pysgotwr. Mae rhagorfraint y Goron yn hyn o beth yn dyddio nôl i deyrnasiad Edward II[4].

Dyma ddywed Maitland PS & Campbell[3] am hawl y Goron ar styrsiynod: *The Sturgeon is of little value in the British Isles. By tradition, any caught are supposed to be offered to the reigning monarch but a number of years ago the Comptroller of Her Majesty's Household informed one of the authors that they are rarely accepted. Occasionally they appear on fish-mongers' slabs for curiosity value. In July 1933 an angler fishing for Salmon in the River Towy in Wales foul-hooked a huge Sturgeon. The fish eventually beached itself. It was 2.79m [110 modfedd] in length, 1.49m in girth and weighed 196kg. [432 pwys] It was a female and contained 36.3kg of caviar - but it was not accepted by the Royal Household.*

Mae'r cofnodion yn dangos y byddai cryn ymdrech yn cael ei wneud weithiau i gydymffurfio gyda'r drefn ond y byddai achosion hefyd o daro bargen yn y fan a'r lle rhwng yr awdurdod (y perchen mewn cyfraith) a'r pysgotwr:

O'r 'Rhyl Journal', 2 Awst 1902
A sturgeon weighing 320 lbs -bigger than the biggest alderman in South Wales - was caught in the Conway. ..... Although the two men who caught the fish gave it up to the Customs authority, they will not be deprived of all the benefit of their good luck, for the Admiralty will pay over to them a portion of the proceeds in compensation for their trouble. They, of course, lost the better part of the catch of salmon they had anticipated, and they also rowed the sturgeon down the river for a distance of five or six miles in order to get it into the custody of his Majesty's representative.

O'r 'North Wales Express', 29 Awst 1902
Llanfairfechan. ROYAL STURGEON CAUGHT. — ...Mr Harry Jones, pleasure boat proprietor, Llanfairfechan, on going down to the stake net he had previously set on the shore off the town, found a

big fish in the water on the shore side of the net. With some difficulty he secured it, and found it to be a royal sturgeon. 7ft. 5in. long, 3ft. 2in in girth, and 1831b. in weight. He informed Custom-house Officer Joyce, of Bangor, who came down and, on behalf of the Admiralty, sold it to him for 6s. [fel y perchen mewn cyfraith wrth gwrs]. He retailed the bulk of it at 1s a pound. Though considerably less in size than the monster fish captured a few weeks ago at Talycefn, it was a very large one, and it is curious that two such immense fishes should be caught in these waters in one season, as they are only rarely met with.

Nid pob un a barchai'r gyfraith chwaith, fel y mae'r cofnod isod yn dangos, ond nid yw'n glir pa mor aml y defnyddiwyd y gyfraith ar bobl.

O'r 'South Wales Daily Post', 13 Mehefin 1896

ROYAL STURGEON IN THE TOWY. In the early hours of Friday [12 Mehefin] morning a very fine specimen of the Royal sturgeon was caught in a shallow on the Towy near Alltywaddon, about two miles above Ferryside. There were six Carmarthen coraclemen fishing in the locality, and they were all "in at the kill." The fish is 8ft. 4ins an length, 3ft. 4in. in girth, and about 3cwt. in weight. Before it was got under control it broke three nets and capsized two of the coracles, with the result that two of the men had to flounder from the water on to the bank. ***It was exhibited throughout the day in a shed near the railway station, and crowds collected to see it. To-day (Saturday) its capturers intend exhibiting the fish in the market-place*** [Pwyslais yr awdur].

5. Styrsiwn Nantgaredig yn y 1920au

Cafwyd hanes oddi wrth Guto Davies yn ddiweddar, trwy law rhaglen Galwad Cynnar Radio Cymru, am styrsiwn ddaeth i'r golwg yn Nantgaredig yn yr 1920au. Mae Nantgaredig tua deuddeg milltir o'r môr (a chymeryd Glanfferi fel terfyn y tir, ond mae cofnod o'r flwyddyn 1879 yn nodi bod styrsiwn wedi ei ddal yn Stowfield ar yr afon Gwy *"... unusually high for a sturgeon to be found in the Wye"*, hyn cymaint â 70 milltir o'r môr fel y llifa'r afon). Mae'r cofnodion afon, a'r wyau y soniwyd amdanynt yn Nantgaredig, yn awgrymu'n gryf mai bwrw grawn oedd nod y pysgodyn.

Tybed beth sydd wedi rhwystro styrsiynod achlysurol Cymru rhag ymsefydlu a chytrefu?

Mae hanesyn Guto Davies yn werth ei ddyfynnu yn ei grynswth, ynghyd â'r llun a ddaeth gydag ef:

"Dyma lun roddwyd i mi gan fy nhad, Eirian Davies gynt o Nantgaredig ger Caerfyrddin, yn dangos sturgeon a ddaliwyd yn yr afon Tywi tua ugeiniau'r ganrif ddiwethaf. Dywedodd dad fod cyfaill iddo wedi ei ddeffro yn gynnar un bore gan feddwl fod buwch wedi disgyn i'r afon ger pont Nantgaredig, gan fod trwst mawr i'w glywed. Nid buwch, ond sturgeon oedd wedi ei ddal mewn pwll ar gwr yr afon. Daliwyd y pysgodyn a'i gario i glos fferm Llandeilo Fawr gerllaw, lle tynnwyd y llun. Disgrifiodd dad fel yr oedd yr wyau (caviar) yn llifo o'r pysgodyn dros glos y ffarm fel llaid. Gan mai pysgodyn brenhinol yw'r sturgeon cyn hir daeth cert i gludo'r pysgodyn i'r orsaf i'w ddwyn gerbron y brenin yn Llundain. Beth amser wedyn derbynniodd fu nhadcu, David Davies o'r Llain Nantgaredig, deligram brenhinol yn diolch am ymdrechion y teulu i arbed y pysgodyn mawr. Wedi darllen y teligram ac oedi tipyn, rholiodd dadcu y papur yn belen a'i daflu i lygad y tan".

Bu ***Duncan Brown*** *yn warden gwarchodfeydd natur gyda Cyngor Cefn Gwlad Cymru a chyn hynny gyda'r Cyngor Gwarchod Natur. Ers ymddeol bu'n canolbwyntio ar ffyrdd o weld y byd naturiol trwy ffynonellau lleol a thrwy bersbectif hanesyddol. Mae'n olygydd Prosiect Llên Natur ar ran Cymdeithas Edward Llwyd.*

Cyfeiriadau

1. http://www.bbc.co.uk/news/uk-wales-south-west-wales-24007739
2. http://www.llgc.org.uk/index.php?id=1514&tx_ttnews[tt_news]=5273
3. Maitland, P.S. & Campbell, R.N. (1992) *Freshwater Fishes of the British Isles*. Harper Collins.
4. http://en.wikipedia.org/wiki/Receiver_of_Wreck

For a full translation of this article please visit **www.naturcymru.org.uk** or phone **01248 387373**.

Natur Cymru *writing competition runner up*

In my backyard

Martin Sherry

Cwm Eigiau

Even in the midst of yet another summer when low-pressure systems seemed to queue up in the Atlantic like jumbo-jets at Heathrow, there were isolated days of such perfection that it was easy to forgive and forget the rest of the time. Cycling the shady lanes of the lower Conwy valley on a fine June morning, when the air felt pleasantly cool on bare legs and the hedgerows were full of honeysuckle and strident wrens, I was reminded why I have chosen to live most of my adult life in Snowdonia. The car was off the road for its MOT and this was clearly a day to be in the mountains. Making a virtue of necessity , I was making my way through Rowen and Llanbedr y Cenin up into Cwm Eigiau. From Llanbedr the Ordnance Survey indicates in bold green dots that the track is a Byway Open to All Traffic but it is clearly not much used. Bracken, cow parsley and nettles clogged my wheels and forced me off the bike for 50 yards or so, until a sunless tunnel formed by hazel coppice subdued the vegetation and made for easier, if muddier, going. The path, brightly edged now with foxglove, campion, herb robert and vibrant blue veronica, narrowed and dropped steeply down to the Afon Dulyn.

The bouldery river bed was overhung by oak and ash and felt almost tropical in the green luxuriance with which bark and rock alike were smothered by lichen, moss and fern. I carried the bike across a neat, unobtrusive footbridge and up onto an unremittingly steep, twisting council road calling for bottom gear and maximum effort. Gradually the angle eased and, as the high tops of the Carneddau hove into view, the road emerged from birch woodland onto a moor of tussock grass and rush and a few sheep.

With easier cycling and gates to open and shut there was much to see and hear that would have been missed in a car. Simple things like the crimson breast and lovely rufous brown back of a linnet perched on a gorse bush, the descending cadence of a meadow pipit's flight song as it parachuted down to earth and the strange, fishing-reel call of a grasshopper warbler were all familiar enough, but at

that moment they were a source of wonder and delight. As I pedalled on towards the mountains I was grinning to myself.

At the road's end where cars were parked, it was a simple matter to lift the bike over the locked gate and continue along a wet track to the dam wall, never repaired after it ruptured with tragic consequences in 1925. Beyond the wall the track became rougher and rockier and it would have been a struggle to ride without front suspension, at least. Even with, it was quite sufficiently challenging for me. Some hill walkers seem to dislike mountain bikes on principle, yet in a situation like this they represent a valid example of what Fritz Schumacher called "intermediate technology". A modern bike is a highly sophisticated machine yet it is unpolluting, an extremely efficient form of transport, and great fun to boot.

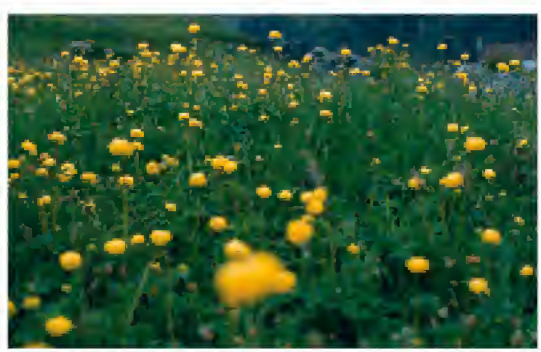
At Eigiau cottage two members of the Rugby Mountaineering Club were re-slating the roof. A farmer, quadbike idling, had stopped for a chat. Suddenly, Cwm Eigiau felt almost busy, if not quite like the 19th century when the farms were occupied and the quarries active. The grassy track steepened and the riding was made difficult by several washouts. Finally, sweating and beginning to burn at the back of my neck, I reached the old slate quarry, abandoned since the 1890s, and hid my bike inside one of its roofless, dressed-slate buildings.

Overhead reared the dark verticality of Craig yr Ysfa. A steep little path wound up through scree and bilberry to the broad stony gully known as the Amphitheatre. I was detained awhile by the spectacle of a black beetle gamely manoeuvring a twig three times its own length, but soon I was at the foot of a rock ridge forming the left wall of the amphitheatre, the start of a favourite rock climb. The guide book describes it as Amphitheatre Buttress, 900ft long, first climbed in 1905 by the Abraham brothers from Keswick and graded Very Difficult, which means that, in climbing terms, it is not very difficult and perfectly feasible to climb without a rope.

Four hundred feet up I paused to savour the situation. Ledges on the far side of the Amphitheatre were a distinctive blue-green flecked with yellow, the fleshy leaves of roseroot and the yellow orbs of globeflower hinting at a different, less acid geology. Overhead, the sky was still a flawless blue. A peregrine ducked silently behind the skyline and did not reappear. Five hundred feet of easier scrambling later, I was reacquainting myself with the horizontal, gazing across Nant y Benlog to the hazy grey shapes of the Glyderau and the dark shark's fin of Tryfan.

The summit of Carnedd Llewelyn beckoned and it was much too fine a day to ignore the summons. After the care-filled concentration of the climb, the walk up was a blissfully untaxing stroll. Others were picnicking at the cairn, so with a nod and a smile I crossed the summit plateau, a confusing, disorienting place in mist or storm, and descended a boulder field towards Foel Grach. Just past the little outcrop known as Tristan's cairn I cut right to reach a branch of the Afon Eigiau, passing chunks of metal debris from a crashed aircraft and the bloated, buzzing carcass of an unfortunate sheep that had ventured too far onto a patch of bright green floating sphagnum. In no time I was back at the bike and clattering down to the dam. Another wet potholed track led to Coedty resevoir above Dolgarrog through damp woods of willow and alder, filled with the repetitive call of the chiffchaff and the limpid song of its almost identical cousin, the willow warbler. The way home took me past the Dutch Pancake house near Rowen which, to anyone tired, hungry and exceedingly thirsty, is thoroughly to be recommended.

Rob Collister



Joanna Robertson

Field Notes

It was almost dark, as usual, as I completed my day's work. I limped down the hill, having twisted my ankle earlier in the day, towards the woodland where my last trap lay. As I stumbled over the fence and through the brambles, I hoped the trap would be empty so I could go straight home to my little caravan below the forest.

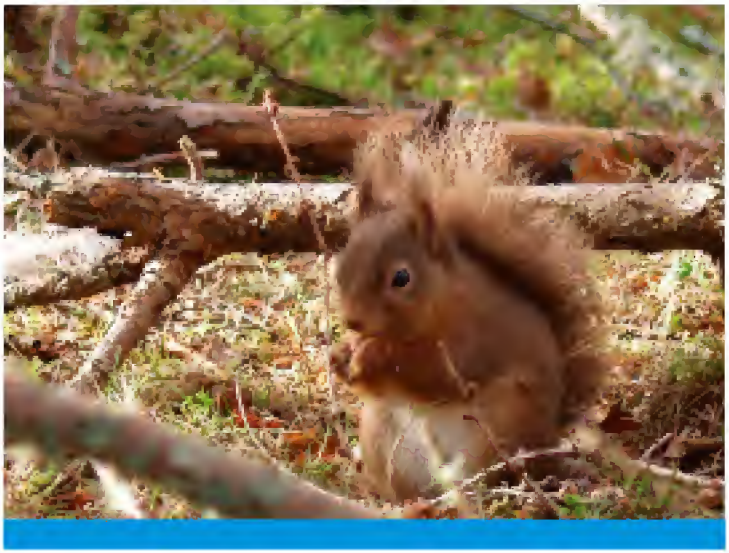
The trap was at the base of a large beech tree, and I could already see that it was shut. A movement inside ruled out another hedgehog, and I expected to see a blackbird inside.

As I removed the plastic covering, I gazed at an almost mythical creature. It sat staring at me as I took in its beauty. Flicking its tail it 'chuck, chucked' at me, and I forgot all about home, food, and my discomfort.

I was looking at an endangered species, extinct throughout most of England and Wales and disappearing steadily from the rest of the UK and Ireland. A 'Biodiversity Action Plan' or 'BAP' species, it was supposed to be a priority species for conservation while officialdom sat down and talked about what might be done, or tried 'cheap and cheerful' monitoring techniques while the species continued to decline.

I considered myself fortunate to be involved with a unique, local conservation project. We were achieving the unachievable, bringing a species back from the brink of extinction by removing the cause of its decline – an introduced species.

While most of the hard work had been done by the Project Officer in the preceding two years, I was now proud to be playing my part in the conservation of one of our best-loved animals. From only around 40 individuals in the late 90s, we now had around 100, and they were spreading out of their forest retreat and into surrounding woodlands.



Ron Bury

That was where I was now, gazing in awe at an exquisite animal. Its bushy tail curled over its back and its large black eyes looking intently into mine, I could just make out its chestnut-coloured fur in the gathering darkness.

I had a licence to handle and mark the animal, but it was too late in the day to do so, as it should now be curled up in its nest. I carefully opened the door of the trap, and my captive was now free. It shot up the beech tree, and stood on a branch against the sky, flicking its tail before scampering through the tree canopy overhead.

Though it wasn't the first I had seen, the sight of that little Welsh red squirrel scampering away was the height of my week, and made all the discomfort worthwhile. A lesson perhaps, to those who said we were wasting our time?

So, what has happened since then? Well, Anglesey is now virtually free of grey squirrels, red squirrels have crossed the bridges onto the mainland and are colonising the woodlands at Treborth and Faenol, and are even being seen in Bethesda and Llanberis! All those years ago, nobody would have believed that was possible, but it just goes to show what dedicated people, and intrepid red squirrels, can achieve.

Not only that, but other red squirrel conservation projects sprang up around the country in the wake of our success, and now grey squirrels are being pushed back in other areas to give the reds a chance of survival.

If you think something can be done, but others tell you it can't, just give it your best shot and see what you can achieve. The greatest enemy of conservation is apathy.

Martin Bailey

Welsh avifauna

What species of bird do you associate with Wales? If asked, many people would say 'red kite'. Now a common sight throughout many parts of Wales (and of course now introduced to Scotland, England, Northern Ireland the Republic of Ireland), this species is a much-cited example of a conservation success story. Although the native red kite remains special to Wales, we shouldn't overlook our many other avian treasures. For example, how many people would think of a Manx shearwater as particularly Welsh?

A nocturnal seabird, 'Manxies' are so ill-adapted to life on land that they only venture ashore on dark nights, and only for a few weeks in the breeding season. Superficially, they're not an obvious choice as an icon of Welsh avifauna, what with their ungainly shuffle when attempting to walk on land, a propensity for ejecting their foul-smelling stomach contents over perceived attackers, and an unearthly cry that heralds their arrival on land. But, as with many seabirds, once flying over the waves Manxies reveal their alter ego, literally shearing the wave-tips with their easy cruising action, their markings switching from dark back to light belly as they switch their angle of flight, flying huge distances with ease. Wales holds more than half of the world population, with recent surveys estimating over 300,000 breeding pairs just on one island alone, Skomer, off the western tip of Pembrokeshire.

What else can Wales boast? As someone who started her conservation career working on chough, it wouldn't be right for me not to mention them. We've got approximately 70% of the UK's population of these birds – crows by taxonomy, but more akin to something far more exotic by appearance, with their glossy black plumage offsetting a bright red, gently down-curved beak, and bright red legs, and a wonderful repertoire of aerial acrobatics.

Maintaining the Atlantic fringe theme, Wales is host to an assemblage of birds that typifies the Western Altantic oakwoods – pied flycatchers, redstarts and wood warblers unite forces with other woodland specialists and generalists. Sadly, many (but not all) of these species are in decline. It's the migratory component of the assemblage that seems to be taking the hit, so an obvious focus of current research is looking at the species' wintering grounds, as well as taking a closer look at possible factors here on their breeding grounds, comparing the fortunes of our declining migrants with those of some of our still-thriving residents.

Sadly, Wales does have its fair share of ornithological losses. Time spent this spring in the North Pennines, with its embarrassment of ground-nesting riches, emphasised to me the challenge that we face in Wales. While crows are ten a penny in our uplands, I count myself privileged if I hear a breeding curlew, and golden plover are now almost in the position that red kites were 50 years ago. Such losses are partially compensated for by the passive wins afforded by being on the spreading northern range of some of our continental visitors, which are now choosing to stay and breed. The influx of little egret has been astounding and you can't help but admire the showiness of their Daz-white plumage. These new additions to Wales's avifauna provide inspiration; and looking at the Welsh birds that previous generations have been able to enjoy should be an aspiration for future management of our environment.

Dr Siân Whitehead

Sam Bryan

Manx Shearwater *Puffinus puffinus* Aderyn-drycin Manaw

Marine matters

Can ecosytems be re-balanced while fish go with chips?

Whelks, whiting and whitebait are all wildlife, together with a host of other marine organisms taken by Welsh fisheries. While farming is based on selectively bred or introduced species, marine fisheries exploit natural wildlife resources. In spite of this fundamental difference, administrative responsibility for fisheries has usually been tagged onto the much larger remit of agriculture departments. Nevertheless, throughout the 20th century some scientists in the marine laboratories were able to undertake fundamental work on planktonic and benthic ecosystems under the guise of investigating the food of commercial species. Only in the last decade have the concepts of ecosystem-based fisheries percolated the corridors of power. In Wales the fiasco last year over Marine Conservation Zones showed how far the ecosystem concept is from being understood, let alone implemented. It is too early to judge whether Natural Resources Wales can live up to its title and really bridge the gulf between "tragedy of the commons" style exploitation and sometimes unrealistic demands for wildlife conservation.

It is easy for politicians to utter platitudes about socio-economics and sustainability, but it is more challenging to decide where detailed policy measures should be leading in the longer term. In his book *The Unnatural History of the Sea*, Callum Roberts undertook an exercise in historical ecology, gathering data from many sources to show how fish populations and some seabed habitats have been degraded since the mid 19th century. Even before there were statistics, old lithographs of fish being sold show how many more large fish of some common species there used to be. Early photographs of fish quays confirm this. One of the main measures used in fishery science is Catch per Unit Effort. By stepwise comparisons between vessels as each technological improvement came in, it is possible to compare the catching power of mid 19th century sailing vessels with modern trawlers, assisted as they are by many electronic aids. Such comparisons suggest that one modern vessel has the catching power of 50 sailing trawlers. Fish landings in England and Wales peaked in the late 1930s coinciding with the era when there were fleets of steam trawlers operating from Milford Haven and Swansea, fishing particularly for hake. Taking into account catching power, the real peak was probably back in the 1890s. Coming to the present day, there are concerns about "fishing down the food web". This concept relates to situations where, having removed the prime fish, smaller species and the invertebrates they once fed on are now targeted. Siren voices can be heard requesting development funds for new fisheries. History tells us that too often it is only after stocks have crashed that funds are made available to investigate their life-histories and population dynamics.

Apart from a general decline in fish sizes and the near extinction in Welsh waters of a couple of rays, the greatest fishery-induced environmental degradation was to beds of native oysters (*Ostrea edulis*). Historical records show that there must have been a series of beds all round Wales from Mumbles to Moelfre. In the 19th century when they were dredged out, the way oyster larvae settle on old oyster shells was not understood so the habitat was lost as well. Experience in America with a different species shows that oyster reefs can be brought back, but depositing thousands of tons of shell is hardly practical here. This is just one illustration of the need for strategic thinking on marine wildlife.

Many readers will be familiar with the Habitats Directive and the SACs in Welsh waters; some will also be aware of the Water Framework Directive, but potentially more far reaching is the Marine Strategy Framework Directive (2008/56/EC). Such official documents are not easy reading, but within them are many of the things that need to be considered in managing Welsh seas between now and 2020. These range from rebalancing the age and size distributions of fish populations, managing mixed fisheries, and avoiding damage to seafloor integrity. It covers targets for restoration, mentions setting aside representative areas, monitoring protocols and much more. Wales may "have previous" when it comes to European environmental directives but the Marine Strategy Framework Directive should provide impetus for closer alignment of fisheries and wildlife conservation policies.

Ivor Rees

Green **Bookshelf** • **Silff Lyfrau**

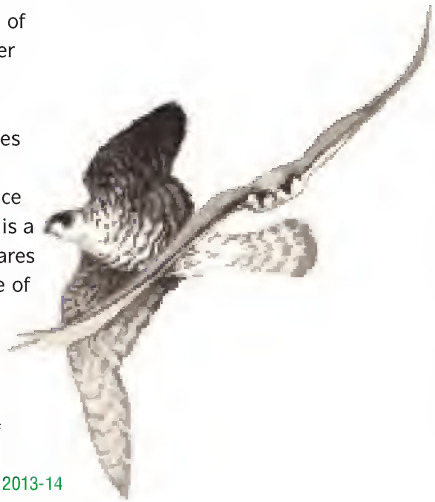
The Breeding Birds of North Wales
Anne Brenchley, Geoff Gibbs, Rhion Pritchard & Ian M Spence. Liverpool University Press
447 pp, £45 Hardback

This beautifully produced and massively authoritative large-format atlas on the status and distribution of breeding birds deserves all the praise it will surely receive.
The editors decided to piggyback the regional ornithological survey work that had been inspired by the national stock-take undertaken by the British Trust for Ornithology between 2008 and 2012. However they have then synthesised that raw data to present much more detailed findings for the North Wales area than would have been possible in the national audit. They have also distilled the work of 770 precious volunteers and presented their census findings not only in the bilingual species accounts (the Welsh language version is only a summary) but also in a sequence of introductory chapters. These cover physical geography, climate and weather patterns, as well as an overview of 15 major habitat types and a synoptic portrait of status changes for the region's birds since the 18th century. The end result is a book relevant to everyone who cares about the landscapes and wildlife of North Wales. It is also liberally illustrated with high-quality photographs so that it is as attractive as it is informative.

Ironically one major source of disappointment lies in the comprehensive nature of its finding. When you look at the latest detailed estimates for certain suites of species (Turtle Doves down 98%, Grey Partridge 70% and Tree Sparrow 55%) there is no way of avoiding the conclusion that in the conservation battle for farmland birds, environmentalism has suffered a catastrophic defeat. It is hard to comprehend that across all those thousands of grazing pastures there are now only 600 pairs of Lapwings in all Wales. When will this haemorrhaging of British nature ever stop, you wonder?

There is hope as well as despair. Crossbills, Goosander, Peregrines, Chough, Buzzards and Red Kites are among a sizeable spectrum of birds that have all seen very healthy increases in their regional presence. However, the most hope-filled part of the whole project is the appearance of the book itself. It reflects a massive logistical and practical achievement all fulfilled by voluntary effort. Conservation is alive and well in North Wales!

Mark Cocker



BIRDS – coping with an obsession
Derek Moore
New Holland Publishers 2013
352pp, £14.99
Hardback

Derek's lively account of his life and times begins, remarkably, with not one but two Forewords. These are by Chris Packham and Bill Oddie. Maybe one was originally intended as a reserve?

The first third of the book covers his school days, his discovery of the Suffolk countryside, and contact with important mentors like GBG Benson (his teacher at the Grammar School in Beccles), and the legendary Bert Axell. His accounts of early visits to Walberswick and Minsmere chime well with me, as I also visited these places at around the same time, meeting some of the same cast including the diminutive gamekeeper Jack, who lived near Westwood Lodge. I also knew another gamekeeper there, Percy Muttitt. Percy's chickens were taken by Montagu's Harriers in the breeding season and Hen Harriers the rest of the year. He didn't seem to mind.

Getting back to Derek, I was staggered by the account of how he left the Grammar School after his 'O' levels because the Head neglected to tell him that he was expected back to do his 'A' levels. However this doesn't appear to have done him much harm.

The next section deals with his work as Director of the Suffolk Wildlife Trust (SWT) which he joined after a varied career in printing and other industries. This was followed

by a spell at an unhappy HQ of the Wildlife Trusts, and finally three years when he was tasked to merge two Welsh Trusts, Glamorgan and the troubled West Wales. He describes well the difficulty of working with the Trustees of small Wildlife Trusts (well, they're all small in Wales), and with some staff. The latter did not always take well to management by Derek. He describes how five of the senior staff at SWT once tried staging a coup to oust him! Needless to say, he stayed and they departed.

The remainder of the book deals mostly with Derek's overseas travels, usually in the company of well-known people like Bill Oddie and Stephen Moss. This is mostly standard fare, covering well-worn ground like Jordan, Coto Donana, USA, Costa Rica and the Galapagos. However, he is not always in good hands on these trips, and his visit to Russia in 1991 lurches from one hair-raising set-back to another. Rather you than me, Derek!

Sadly, the author has been rather let down by New Holland Publishers, who have allowed a number of glaring typos to appear.

Geoff Gibbs

The Secret Lives of Puffins
Dominic Couzens and Mark Sisson
Bloomsbury 2013
176 pages £20.00

Of all seabirds, indeed one might even suggest of all birds, more photographs are taken of puffins than any other. If you have visited a colony you know exactly what I mean, and if you have not yet made such an excursion, one glance at this galaxy of pictures will surely lure you next year. The marvellous photographs by Mark Sisson have been taken at colonies from Iceland and Norway to Scotland, Ireland and Wales, where he has been a regular visitor to Skokholm and Skomer. Most of these are close up views of Puffins, but occasionally there is one showing a colony like Skomer North Haven at bluebell time.

This is primarily a photographic compendium of Puffin life, at least at the colonies, for life at sea where this iconic bird spends eight months of the year is still largely a mystery. As the text says "the private life of the puffin at sea is still one that we know very little about."

Having been inspired by the book, where does the reader go to see puffins? Sadly such information is not provided, indeed colony locations are rarely mentioned in the text. Neither are references provided; what a pity books like *Puffins* by R M Lockley and *The Puffin* by Mike P Harris & Sarah Wanless, to mention but two, are overlooked. A reviewer's grumbles yes, but soon put to one side as one turns the pages, each photograph a delight, so that I cannot wait until the coming season and a visit to a colony, and yes, more puffin photographs.

David Saunders

52 Wildlife Weekends
James Lowen
Bradt Wildlife Explorer
234 pp, £14.99

James Lowen samples the wildlife on offer throughout Great Britain in 52 bite-size chunks, one for each weekend of the year. In this scheme, readers can chose from six weekends in Wales, six in Scotland, and the remainder in England. The amount of rushing about involved is a reminder of the benefits of living in one wildlife-rich place and getting to know it well in all seasons.

I imagine this book is mainly aimed at young urban dwellers, and 'wildlife weekends' are certainly a growing market. As with other Bradt guides, and despite the demands for superficiality inherent in this kind of exercise, there is knowledge and depth on display here. There is a handy map at the front, giving locations and dates of the weekend trips. There is so much wildlife to see everywhere, anytime, but this seasonal guide to wildlife-watching makes a brave stab at singling out some highlights: I hope it whets the appetite of its readers and brings more visitors to Wales with a passion for nature and money to spend.

James Robertson

Shovelhead worms of Wales

Shovelhead worms — so-named for their flattened shovel-like "heads" – are a small group of marine bristleworms (polychaete annelids) belonging to the family Magelonidae. These beautiful worms are rather enigmatic animals, having uncertain affinities with other polychaetes. It may even be that they are one of the oldest extant annelid groups known.

Amgueddfa Cymru–National Museum Wales is a major UK centre for the study of polychaete worms and other seabed life, and the shovelhead worms are one of our research subject areas. In the last 13 years we have discovered 11 species new to science and raised the worldwide total to approximately 70. Our work continues and we are now 30% towards a complete revision of the group.

There are five shovelhead species known from Welsh waters, one of which (*Magelona johnstoni*) was described in 2000 by Museum staff in collaboration with German colleagues. The species was named for the famous 19th Century naturalist George Johnston of Berwick-upon-Tweed, who named the first British species *Maea mirabilis* ('the wonderful Maea'), now known as *Magelona mirabilis*. Our offshore explorations (*BIOMÔR Reports* series[1]) have helped map shovelhead distributions around Wales. *Magelona johnstoni*, *M. mirabilis* and *M. filiformis* burrow in sublittoral shallow sands, and on the shore. *Magelona alleni* and *M. minuta* prefer muddier habitats, the former sometimes being encountered on the shore (e.g., at Mumbles, Swansea Bay).

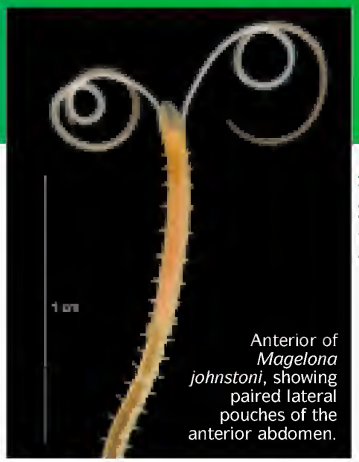
Kate Mortimer

Scanning Electron Microscope image of a lateral abdominal pouch of *M. johnstoni*

Shovelhead worms are generally shallow water species, found in depths of less than 100m: however, several species have been recorded from samples taken at up to 2000m depth. Typically long and slender, most species are less than 1mm wide and 10cm long. Their bodies are divided into two regions: a thorax of eight or nine segments, and an abdomen of many. The change from thorax to abdomen is often marked by a conspicuous constriction of the body, and the last thoracic segment may bear specialised bristles that differ in shape from those on all other segments. All species have two very long, papillated feeding tentacles, termed *palps*, which are held up within the water column or lain on the seabed to gather up their detritus food. The structure and ventral position of the palps, either side of the mouth, are unique features among polychaete annelids.

We are currently studying the behaviour of *Magelona johnstoni* and *M. mirabilis* (from Gower beaches and Berwick-upon-Tweed) in situ in a customised laboratory aquarium. Close observations have been made on how the species burrow, feed and even regenerate their palps when these have been lost or cropped through predation. One field of particular interest concerns the function of the lateral pouches that occur on some abdominal segments. This has puzzled every expert to work on shovelheads. Pouches are present in some species only, and several pouch types have been recognised. *Magelona mirabilis* and *M. johnstoni* are very similar morphologically and often co-exist in the same habitats, however only the latter has large pouches at the start of the abdomen. Our ongoing observations are already giving us a great insight into the biology of these fascinating and obscure creatures. Before long, we hope to solve the long-standing mystery of the pouches!

Andy Mackie



Anterior of *Magelona johnstoni*, showing paired lateral pouches of the anterior abdomen.

Kate Mortimer *is a Marine Research Assistant and* ***Dr Andrew Mackie*** *is Head of the Invertebrate Biodiversity Section at Amgueddfa Cymru – National Museum Wales in Cardiff. Dr Mackie is also President of the International Polychaetological Association.*

1. The Museum has published five *BIOMÔR Reports* to date, detailing the findings of its collaborative Studies in Marine Biodiversity and Systematics.

Amateur Entomologists' Society

Elusen Gofrestredig Rhif 267430

Promoting the study and conservation of insects since 1935

- *Bug Club*
- *Books*
- *Periodicals*
- *Members' Day*
- *Indoor and field events*
- *Annual Exhibition*
- *Grants and Awards*
- *Online resources*

"Dechreuais gyda'r AES" - dyna ddywed llawer o entomolegwyr gwybodus, prun ai'n broffesiynol neu'n amatur.

Nod y Gymdeithas yw hybu astudiaeth creaduriaid di-asgwrn-cefn gan amaturiaid a phobl ifanc.

Gwnawn hyn drwy gyhoeddi llyfrau a chylchgronau, a thrwy drefnu digwyddiadau a gweithgareddau addysgol, mewn amgueddfeydd ac yn y maes

AES BULLETIN

- Ein cylchgrawn chwarterol i aelodau
- Erthyglau ar bob agwedd ar entomoleg
- Gwobr flynyddol am yr erthygl orau ar bryfed Prydain

BUG CLUB MAGAZINE

- Cylchgrawn lliwgar ar gyfer aelodau iau, yn cynnwys erthyglau, posau, lluniau a cherddi
- Cyhoeddir bob dau fis
- Gwobrau am y cyfraniadau gorau gan blant

INVERTEBRATE CONSERVATION NEWS

Cofnodolyn ar warchodaeth 'y creaduriaid bach sy'n rhedeg y byd'

www.amentsoc.org
twitter.com/amentsoc
AES, PO Box 8774, London
SW7 5ZG

ENTOMOLOGIST'S RECORD

- 6 rhan y flwyddyn
- Papurau gwyddonol a Nodiadau byr
- Adolygiadau blynyddol diffiniol ar:
  - meicrolepidoptera
  - Lepidoptera mudol

www.entrecord.com

Mammals round-up

The increased distribution of **otters** continues to bring in regular records. North Wales Wildlife Trust had a sighting in May from Ben Stammers near Pentir, Gwynedd; a visitor to our Eisteddfod stand reported one at Aberdesach, on the Llŷn peninsula; and there was a record of a mother otter and two cubs on the A548 between Llanrwst and Abergele. It was the caller's first sighting of an otter in ten years.

Swansea University is gathering information on the use of the coast by otters in Wales, anything from docks to rocky shores and estuaries. If you have seen an otter in a coastal or estuarine location, they would be grateful if you would let them know. Please send location, (grid reference is ideal but don't worry if you can't provide one), date, approximate time of day, and details of what you saw with as much information as possible. Was the otter on the beach, on rocky areas, or in the sea? How many otters did you observe? Have you seen them at this location before? Historic records are also welcome. Please send any information to: Dan Forman, Coastal Otters Project, Department of Biosciences, College of Science, Swansea University, Singleton Park, Swansea, SA2 8PP, or email: **otters@swansea.ac.uk**

Sadly, the increased abundance of otters is revealing more otter deaths, through traffic incidents, but also in October through the use of an illegal trap. Natural Resources Wales officers were appealing for help to catch a poacher after an otter was found dead in an illegal trap placed on the River Cefni in Llangefni on Anglesey. The otter – a protected species under European law – was discovered by a passer-by in an unlicensed eel trap which had been discarded on the riverbank.

Officers believe the fully grown otter became entangled in the net and drowned as it entered the trap in search of food. The trap was illegally placed and there was no guard in place to prevent the otter from getting inside. NRW staff were keen to trace the perpetrator as this kind of illegal activity has an impact on fish stock, on wildlife and the local economy. Poaching carries a fine of up to £5,000 and/or six months imprisonment.

The Deer Initiative was established in Wales in 1999 with the aim of ensuring a healthy, sustainable wild deer population in Wales. Mark Fletcher reported a Fallow Deer buck crossing the road down to Aberogwen in April 2013, which has now been passed onto the local record centre. Fallow deer have spread their range from SE England north-westwards leading to occasional sightings in North Wales.

A new project has come to Wales to develop a Welsh mammal monitoring network and bring together those in Wales working for mammal research and conservation. **The Mammal Monitoring Network** (MaMoNet) Wales project aims to create a network of volunteers to gather data on hedgehogs using footprint tunnels, and harvestmice using bait pot and nest search survey techniques.

Project Officer Becky Clews-Roberts ran a harvest mouse

Charis White

Mandy Marsh

Fallow deer in temporary residence near Aberogwen

workshop at Newport Wetlands Reserve on 31st October, looking at the ecology and behaviour of harvest mice, followed by a nest search in the reed beds.

Becky is also organising a conference to take place on 15th February 2014 at Aberystwyth Arts Centre, which will focus on hedgehogs in the morning and harvest mice in the afternoon. **www.mammal.org.uk/wales_conference**

Frances Cattanach is Director, North Wales Wildlife Trust

Getting involved

Anyone wishing to carry out a harvest mouse nest search, either on their own or as a group, can use The Mammal Society's survey protocol found on their website: **www.mammal.org.uk/sites/default/files/HarvestMouseNestSearch.pdf**

To get involved in MaMoNet, please contact **Becky Clews-Roberts** at **r.clews-roberts@themammalsociety.org** or call 0**7743 085 374** for more information. **www.mammal.org.uk/mamonet_wales**

Don't forget to pass any mammal records into your Local Record Centre – find yours here: **www.lrcwales.org.uk**

AWDURDOD PARC CENEDLAETHOL ERYRI · SNOWDONIA NATIONAL PARK AUTHORITY

Courses run throughout the year including:
Landscape Painting, Coloured Pencils, Calligraphy, Drawing,
Botanical Painting, Wild and Garden Flower Illustration, Print Making

Our regular tutors include:
Howard Coles, Margaret Stevens,
Dafydd Humphreys & Susan Christopher-Coulson

Canolfan Parc Cenedlaethol Eryri / Snowdonia National Park Centre
Plas Tan y Bwlch, Maentwrog, Blaenau Ffestiniog, LL41 2YU
☎ 01766 772600 plas@eryri-npa.gov.uk www.plastanybwlch.com

PARC CENEDLAETHOL ERYRI
SNOWDONIA NATIONAL PARK

Fairy fun time in the garden

When a strapping lad turned up to the waxcap foray in a pink tutu and fairy wings, I knew our marketing strategy had worked.

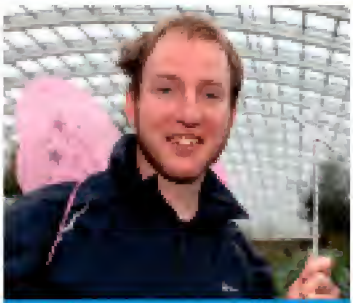
The second Wales Fungus Day held at the National Botanic Garden of Wales attracted a motley crew of young and old dressed as fairies and elves, no doubt attracted as much by the offer of free entry as the chance to dress up.

Despite persistent rain, 360 people turned up for an event-packed day, and many others attended over 40 fungi-related events across Britain for what was also UK Fungus Day. Is this an indication that interest in wild mushrooms is on the rise? Here at the Garden there's been an increase in enquiries for fungi walks and talks, conservation advice and for help with fungi identifications. Stunning images from the Garden, often with an accurate name, keep popping up on Flickr and Facebook. There are also a growing number of staff and volunteers looking for fungal surprises amongst the Garden's nooks and crannies, and this is throwing up all sorts of new records.

In early September a Garden volunteer, Pam Murden, told me she'd seen an ugly looking fungus next to a hornbeam tree. This mould-covered Old Man of the Woods *Strobilomyces strobilaceus* hadn't been recorded in south-west Wales before, and became the highlight of three fungal tours organised for 90 visiting delegates from the British Mycological Society's international conference which was being held in Cardiff. One of these delegates even declared that he'd been waiting 50 years to see this ugly treasure.

The blushing bracket *Abortiporus biennis* also hadn't been recorded this far west in Wales. Its glistening blood red blobs caught the eye of the Garden's volunteer wildlife group, who discovered it growing on lawn beneath a mature pedunculate oak.

Finding a fungus that hasn't been recorded in your area is just one of the great pleasures to be had from field study. Before you know it, you'll be scanning though the treasure trove of fungi species distribution maps held by the National Biodiversity Network Gateway website database (nbn.org.uk). I did quite a bit of this after Wales Fungus Day. Until Pat O'Reilly's woodland fungi walk, I hadn't appreciated the limited distribution of the fluted bird's nest fungus *Cyathus striatus* across Wales – this pops up on our log piles here every autumn. Nor did I know, until fungi guru Ray Woods told me, that the King Stropharia *Stropharia rugosoannulata*, had never been recorded in Wales and rarely in England. This was fruiting all over our woodchip-covered flower beds, so how did it get here, given that the Garden makes all its own woodchip from pruned or felled trees and shrubs? It's a mystery.



Casrl Stringer

Pink fairy man turned up for Wales Fungus Day 2013

And then there are mysterious fairy rings. Radio 4's *Living World* came here in September, with Professor Lynne Body, to record a programme on the science of fairy rings. This was early in the season but I managed to find a small fairy ring of fruiting lilac pink gills *Entoloma porphyrophaeum* on one of our species-rich hay meadows. There are very few records for large fairy rings in Wales apart from the 50m wide *Lepista paneaola* ring found by David Mitchel and Ray Woods in Blaen Nedd near Ystradfellte in Powys, which is currently the largest known ring in the UK. If you come across a large fairy ring, please let tell me about it at bruce.langridge@gardenofwales.org.uk

Bruce Langridge

Casrl Stringer

The fruits of a waxcap walk

NBGW

King Stropharia
Stropharia rugosoannulata

The Open University
Y Brifysgol Agored
Wales Cymru

Now's the time to learn something new

Start something amazing.
Choose from over 500
inspiring modules.

Nawr yw'r amser i ddysgu rhywbeth newydd

Dechreuwch rywbeth anhygoel.
Dewiswch o blith 500 o fodiwlau
llawn ysbrydoliaeth.

Request a prospectus
Gofynnwch am brosbectws

- (029) 2047 1170
- Wales@open.ac.uk
- www.openuniversity.co.uk/wales

INSPIRING LEARNING YSBRYDOLI DYSGU

The Open University is incorporated by Royal Charter (RC 000391), an exempt charity in England and Wales and a charity registered in Scotland (SC 038302).
Ymgorfforir y Brifysgol Agored gan Siarter Frenhinol (RC 000391), elusen eithriedig yng Nghymru a Lloegr ac elusen gofrestredig yn yr Alban (SC 038302).

Ancient trees - help on the way?

April 2013 was a bad month for Wales' ancient trees. The Pontfadog Oak, the oldest and most notable of our ancient oaks, blew down in the early morning of 18th April.

But at least this provided the opportunity to raise the important issue of whether or not we are looking after our ancient trees properly. Just a few months before, experts from the Ancient Tree Forum had drawn up a wish list of measures, like crown stabilisation, that might have prolonged the tree's life. The total cost was less than £5,000, but most of these measures were not taken as no funding was available.

In response to press interest, a spokesperson for Alun Davies, Natural Resources Minister, reiterated that the Welsh Government is looking to strengthen the protection for ancient trees in Wales. That commitment had been made partly in response to a petition by Coed Cadw (Woodland Trust) which was also supported by the Tree Council, the RSPB and the National Trust.

The good news is that things continue to move forward, if slowly. A task and finish group is to be established to develop concrete proposals for strengthening protection. Staff from a number of environmental NGOs have agreed to be considered as members, though to my knowledge none has yet been appointed.

An initial discussion paper quotes Rev Francis Kilvert's description of the ancient oaks of Moccas Park in 1876: "those grey, gnarled, low browed, knock kneed, bent, huge, strange, long armed, deformed, hunchbacked, misshapen oak men that stand awaiting and watching century after century." It refers to the yews of Strata Florida as examples of ancient trees which have a resonating cultural significance. It is significant that the 2008 Planning Act amends Tree Preservation Order Legislation – but these changes have only been brought into force in England, not in Wales.

Rob McBride

The iconic Pontfadog oak at the Gate of the Dead, Ceiriog Valley, is being entered into the European Tree of the Year Competition.

So what should conservationists be rooting for in any changes to legislation? There are many fairly minor changes that could make a lot of difference. Could I make a heartfelt plea, however, that any change should include three absolutely key elements:

- Positive encouragement and support for landowners who wish to do the right thing by their ancient trees. Any regime based purely on stopping people doing bad things will clearly have a limited value. If we really want to look after these trees we need to find positive ways of engaging with their owners.
- At present, the law gives no protection whatever to trees which are "dying or dead or have become dangerous". But we know that many trees take centuries to gradually decline, and it is in their final period that they have perhaps the greatest value. The law should make exceptions only for ancient trees that are dangerous. And even then, if it is possible to make the tree acceptably safe by, say, crown reduction or even pollarding, it should surely allow just this, rather than allowing the tree to be totally destroyed.
- Finally, has the time not come to redefine the word 'amenity'? An ancient tree might play host to the incredibly rare oak polypore fungus *Piptoporus quercinus* that grows out of the heartwood of old oaks and has been recorded in Wales only twice. It may be well-known in the local community or have a really notable piece of folklore attached to it. But, at present, if it is not visible from public areas, roads or footpaths, it would be difficult to establish that it had 'amenity' value. Surely the time has come to recognise that the value of ancient trees is so much more than just this?

Rory Francis *is Communications Officer at Coed Cadw – The Woodland Trust.* **www.woodlandtrust.org.uk/saveourtrees**

Diwrnodau Gwaith Gwirfoddol Cymdeithas Eryri: Dewch i helpu Eryri

Snowdonia Society Volunteer Workdays: Do your bit for Snowdonia

Gwnewch amrywiaeth o dasgau, yn cynnwys cynnal a chadw llwybrau, casglu sbwriel, rheoli cynefinoedd, plannu coed ac arolygon o famaliaid.

Complete a range of tasks including footpath maintenance, litter picks, habitat management, tree planting and mammal surveys.

A wyddoch chi am unrhyw unigolion neu grwpiau o bobl ifanc 14-25 mlwydd oed? Holwch am ein prosiect "Active Eryri" a gefnogir gan Gwirvol.

Do you know of any groups or individuals of young people aged between 14-25? Ask us about our "Active Eryri" project supported by Gwirvol.

mary-kate@snowdonia-society.org.uk
www.snowdonia-society.org.uk
01286 685498

NATUR CYMRU
NATURE OF WALES

WINTER/GAEAF 2013-14

9 771742 374001 12

www.naturcymru.org.uk
www.natureofwales.org.uk

£4.00